LOCAL CONSTRUCTION REGULATORY PROCESS INNOVATION
A COMPARATIVE ANALYSIS OF FLORIDA BUILDING INSPECTION DEPARTMENTS

By

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By
Richard Harold Schneider

This work is dedicated,
with love,
to my father Sam Schneider (1915-1980),
and to my daughter Samantha Raye,
who is just starting out in this world.

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This research focuses upon the organizational behavior of city and county building inspection departments, local government regulatory agencies which implement community development plans and policies. The personnel who staff these departments are street-level bureaucrats much like police, welfare workers, and teachers. However, unlike the latter groups, neither building inspectors nor their organizations have been studied in great detail.

The intent of the study is to document some of the factors associated with the decision of Florida building inspection departments to implement innovative administrative, personnel, informational, and management features. These innovations have been identified as features which help citizens move more easily through permitting and inspection phases of local building regulatory processes.

Based upon field research conducted in Tampa, Florida, and investigations of eight other jurisdictions across the nation, the researcher hypothesizes that the decision to adopt specific innovations stems from three independent variable sets--political, community (socio-economic), and organizational. To quantify and test the hypotheses, indicators are operationalized by a questionnaire distributed to 210 building inspection departments around the State of Florida

The results of the survey, a stratified, random sample, which netted 136 responses (29 percent of the State's building inspection agencies), suggest that local departments do differ in their decisions to adopt different types of innovative administrative, personnel, informational, and management features The most powerful predictors of these decisions tend to be the type of local government structure in the community (for cities only) and the extent that agency permitting revenues cover department operating expenses These variables were predicated, respectively, as a measure of the centralization of power in the community (a political set variable) and as an indicator of organizational slack (an organizational set variable). Together they accounted for more than 37 percent of all the statistically significant associations uncovered.

Other findings suggest that

(1) Although local government structural types may be important in explaining the decision to innovate, other political set variables tend to score relatively low

(2) The use of computers in recording and aggregating permit data at the local level is not nearly as widespread as expected, and

(3) Agency staff tend to prefer informal plan and development review sessions to highly structured and visible formal meetings that some communities have instituted.

This paper concludes with a call for additional research into local development regulatory activities and functions. Such studies should capture the concerns of the targets of regulatory decision making--citizen users and clients--as well as the input of agency line and staff employees.

CHAPTER I

INTRODUCTION

There is probably no subject more chronically controversial in American society than that of the role and extent of government regulation. Indeed, from the time of the Articles of Confederation to the present, Americans traditionally have been ambivalent about the intervention of government in private dealings. This ambivalence seems to have moved more toward antagonism in recent years as the scope of government activity has expanded to keep pace with the information explosion, and as the conservation of public resources--land, air, water, energy--have tended to demand greater government attention and involvement. Although there will probably always be tensions between the regulated and the regulators, the proliferation of government regulations and regulatory agencies now has even the government worried.

This is particularly true in the area of land-development and building regulation. Over the years, an extraordinarily complex welter of land-use and development regulatory agencies has evolved. The intricacy of this bureaucratic labyrinth has all but defied description. So much so that government consultants--the American Planning Association for one--caution investigators from the outset that they ought to refrain from conceptualizing the assortment of state, federal, and local land-use regulatory agencies as a "system" since the inter-connections between and among them are either tenuous, untraceable, or nonexistant.[1]

This situation frustrates both public and private participants. Some have characterized the overlapping and often conflicting land development and building control mechanisms as 'regulatory pinball" since the actors--builders, developers, contractors, landowners and even public officials--are bounced back and forth between unyielding bureaucracies. Moreover, these bureaucracies are often slow to adopt significant changes--innovations--in design processes, administrative procedures, or agency structures which would assist citizen access to or through the organizational maze.

It is clear that the regulatory quagmire did not develop overnight nor did the red tape by which we are all so intimately, if unwillingly bound, manufacture itself. We have, as Kaufman has so simply summed it up, brought it upon ourselves through "diversity, distrust, and democracy" (Kaufman 1977, p. 58). That is, the regulatory process and its behavioral permutations at federal, state, and local levels is deeply and inextricably rooted in the political process.

This political process--of our own making though not necessarily always within our control--spawns regulation out of compassion, among other motives. That is, through the balancing of competing interests it seeks to protect us from each other, to alleviate or forestall human distress, and to enforce concepts of "fairness" relative to the allocation of social goods and services. To accomplish these lofty and widely endorsed goals, the political process has implanted and empowered a vast array of administrative agencies that can focus down to minute levels of concern.

Consider, for example, recent administrative regulation of land development and building decision-making in Florida. Spurred by growing in-migration to the state in the 1960's, by water shortages, and by concern for protection of Florida's coastal zones and other sensitive lands, a series of legislative acts was passed in the early and mid-1970's which interposed state planning authority in certain matters (e.g. the Florida Environmental Land and Water Management Act of 1972, Chapter 380, *Florida Statutes*) and which forced localities to act in other situations (e.g. the Local Government Comprehensive Planning Act of 1975, Chapter 163, Part II, *Florida Statutes*). These laws added substantially to existing state enabling legislation empowering counties and municipalities to enact zoning ordinances, subdivision regulations, and building codes. Indeed, the state required localities to act in many areas which were formerly voluntary in nature. To oversee enforcement of development practices, existing city and county agencies were blanketed with increased regulatory responsibilities and were joined by newly created regional and state administrative bodies. Together, this many tiered--though not necessarily coordinated--development management apparatus was given the power to regulate the physical development of areas as large as the Florida Keys and as small as the individual building site.

This paper focuses on the behavior of those agencies which regulate the smallest scale of development noted above. We do so for a number of reasons, not the least of which is that we believe this to be a necessary building block in the step toward an understanding of how the overall regulatory pattern fits together. Moreover, as we shall subsequently discuss, a relatively large number and wide variety of citizens have direct contact with the lowest level agencies regulating building and development in Florida (and elsewhere) While regional or state development management agencies may make policy affecting a greater number of persons at one time, their personnel have a much more narrow and restricted public visibility and contact Further, if one believes that policy-making is only as valuable as the extent of its implementation, then one must look--either first or eventually--to the place where the "rubber hits the road," the locally-based regulatory agency

Study Focus: The Building Inspection Department

For these reasons, among others, this paper aims to address several basic, unanswered questions about the behavior of local construction (or building) regulatory agencies in Florida and about the forces which shape and mold that behavior Generally, we wish to explore whether or not these agencies--municipal and county building inspection departments--significantly and systematically differ from one another in their treatment of clients and if so, suggest some of the causes and consequences of this differing treatment. Specifically, we are interested in investigating the propensity of local building regulatory agencies to adapt innovative administrative, personnel, informational and management procedures which assist citizen access to and through the four phases of the building regulatory process--application, plan review, construction inspection and final inspection [2]

Builders, developers, contractors, architects, and engineers have long alleged that building inspection departments in different jurisdictions distinguish (some say discriminate) between clients on the basis of a number of factors unrelated to the merits of their work. Localism, size of the client's firm, union influence, political and other "payoffs,' newness to the area, are all factors said to be related to the client's ease of approach to and transition through the basic phases of the new construction regulatory process.[3] Moreover, these factors are reputed to be intimately associated with the initial adoption and subsequent amendment of local building codes, the legal framework upon which the regulatory process rests.

While we consider that the above factors may well be important in determining access to code development, promulgation and enforcement, we suggest that they have never been assessed from a systematic standpoint. That is, they have been associated with idiosyncratic access to specific systems rather than as part of a wider, more complex picture wich involves sets of variables acting in concert or contradiction to produce client orientation patterns. Thus, we suspect that building inspection departments, like police agencies, tend to develop _styles_ or behavior toward classes of clients.[4] We hypothesize that these styles, manifested in the use of specific innovative procedures, are determined by key _political_, _community_ (socio-economic), and _organizational_ variables, operating upon and within the local agency. One of our intents in this research is to uncover some of the data that future investigators can use to typologize agency styles.

Analytical Orientation

Our overall analytical framework and strategy relies upon Easton's political systems model (1965a). We consider it to be the most logical and appropriate schema in which to illustrate behavioral relationships and linkages on the macro scale. For example, we conceive of building inspection departments to be "street level bureaucracies," much like the police, welfare agencies, and minimum housing standard bureaus (Lipsky 1976, p. 196). Like them, building inspection departments process a great deal of the day-to-day demands citizens press upon their local political systems--the conversion processes--which translate inputs into authoritative allocation of value outputs (Easton 1965b).

However, unlike the other street level bureaucracies cited above, building inspection departments do not deal primarily with communities' least affluent or politically involved citizens. Rather, they deal with those people who constitute the solid social, political and economic backbone of local affairs.[5] We suggest that it is as important to understand how local conversion systems translate the demands of these individuals into administrative practices and/or public policy as it is to understand the demand processing (or non-processing) of low SES citizens in local political systems.[6] Indeed, explanation of the former may shed light on the latter.

Easton's theory provides an analytic map by which we can trace the movement of interconnecting events as they affect the conversion of demands to outputs. To flesh out the map, we utilize what might best be termed "medium gauge" theory to explain and predict the behavior of local agencies in adopting certain innovative features. For example, within our first group of independent variables--the political set--we suggest that centralization of local community power, the autonomy of agency decision-making, and the attitudes of agency chiefs toward "distributive regulation" are key factors which affect the decision to adopt specific administrative, personnel, informational, and management innovations.

In our second trio of variables--the community set--we postulate that several socio-economic factors, community size, population change between 1970 and 1977, and the perception of economic competition between local builders and developers impact the adoption of innovative features.

Our third collection of variables--the organizational set--suggest that agency leaders' professional orientations, the presence of organizational slack, and the boundary-spanning activities of an agency, are all related to the propensity to adopt innovations. For each of the concepts noted above, we have identified and operationalized indicators which have the power to measure the desired variable.

Our broad intent in this is to get a better understanding of how and why local public regulatory bureaucracies make decisions to adopt innovative (and therefore risky) changes which will directly affect their client relations. We suspect that agencies which perform generally similar functions differ greatly from jurisdiction to jurisdiction in their use of procedures and processes which make it easier--or tougher--for certain citizens to use the regulatory bureaucracy. The questions are: how are these differences made evident and why do they occur?

In many ways this concern is linked to the broad-scale "bureaucracy problem" itself (Wilson 1973, p. 2). That is, what are the conditions under which the organization--made manifest in the street-level bureaucrat--will perform the "right" and most 'effective" action to equitably serve citizens needs and wishes, while fulfilling the objectives of public policy goals? The search for these conditions, or variables, is basic to the "innovative organization" approach we have used in this research, and to the study of environmental conditions which predispose organizations to be innovative. It is also fundamental to the universal bureaucracy problem which is at the heart of this research.

Research Rationales

As noted above, the focus of study and the research vehicle is the Florida building inspection department. These agencies are among the most overlooked and anonymous administrative-regulatory arms of local government. The reason may be that building inspection is not a very glamorous or exciting government function. With the exception of a sporadic scandal unearthed by an enterprising reporter, these bureaucracies are seldom in the headlines. They do not deal with crime or criminals; they do not put out fires; they do not process the poor, the elderly, the abused or the insane. They do not directly provide public amenities such as parks, playgrounds, or bikepaths. Indeed, building inspection departments have been characterized as 'places where careers end rather than begin' (Field and Rivkin 1975, p. 48), since their staffs--inspectors, plans examiners, administrators, zoning enforcement officers and clerks--often migrate to municipal service only after long years in the local construction/development industry.[7] More productive of their general anonymity however, is their daily immersion in the multifaceted technical minutia of building and zoning codes--detail work which places them beyond the pale of public knowledge, and certainly, beyond general public interest. It is precisely because of this immersion, however, that they are squarely within the special interest sphere of the construction/development industry and allied professional and labor concerns.

Because of its central position in regulating these mammoth concerns, said to be the state and nation's largest combined economic enterprise, the local building inspection department tends to be one of the most politically sensitive agencies of government. This sensitivity is exacerbated by the fact that 'most local building officials lack basic job security'[8] (Field and Ventre 1971, p. 139). This national finding of almost a decade ago holds true today as well. Our present research for Florida reveals that only 16.9 percent of chief building officials surveyed report having civil service job protection.

Consequently, inspection personnel, in general, tend to have acquired the reputation for being unduly cautious and conservative. This conservatism, which manifests itself in the enforcement and administration of local building codes, gives agencies the potential to exercise enormous economic power over new construction activities in localities in several areas.

For example, local building inspection departments are enabled by state legislation to permit or deny approval of plans for the initial construction of structures.[9] Departments also monitor subsequent construction progress for electrical, plumbing, mechanical and structural system compliance with code regulations. At the completion of the project, building departments are also generally empowered to issue, upon final inspection, "certificates of occupancy," which are required before dwellings or public buildings may be used. Should a department inspector hand out a "stop work" order instead (generally called a "red tag"), any number of sub-contractors and laborers may be thrown out of work, not to mention the general contractor and ancillary professional associates.

To developers, builders, contractors, and property owners, the result can be disastrous. Since the margin of profit per project is often slim and since lending institutions often compute their interest daily, delay can mean the difference between financial life and death to these entrepreneurs. A frequent complaint of the unsuccessful developer-builder is that arbitrary, unduly complicated, incompetent or outright discriminatory code administration and enforcement systems are to blame, partially, or in total, for their failure. Whether this is sour grapes, the "luck of the draw" or related to other, more systematic variables seems to us to be worthy of investigation. Two congressional inquiries on the impact of building regulatory systems on small home builders have reached inconclusive determinations on some of these points.[10]

Given the real and potential reaches of power of the building inspection department, it is unfortunate that so little scholarly attention has been devoted to it from the policy sciences or planning vantage point. With the exception of a seminal work on the "building code burden" (Field and Rivkin 1975, p. 2), there is very little research dealing with the local building regulatory function. This is odd since, as we have implied above, development permitting is a key link in the actual implementation of community plans. Moreover, it is an area of government in which a very considerable amount of responsibility has been delegated to appointed local officials. It may well be that local permitting abuses have helped spur the apparently increasing trend for states and the national government to assert control over local development regulatory practices (Starnes 1977). We believe that this is also worth serious inquiry and it will be addressed in our study.

As a final research rationale, we turn to the work of the 1969 National Commission on Urban Problems (the Douglas Commission). One of its major findings--which surprised few of the planners, builders, or developers who participated in the commission hearings--was that the confusing proliferation of development standards across America was a major hinderance to the promulgation of effective land-use planning legislation on a national, regional, or statewide or even a local basis. As one of the committee's expert witnesses wrote,

> Had an old and vicious enemy of the United States set out to destroy it by slow torture, he would have invented our urban development standards, the regulations which support some of them, the administrative systems which support the regulations and the whole urban development process. (Feiss 1974, p. 1)

We believe that investigation of the propensity of local construction regulatory systems to innovate procedural reforms can shed some light on the origin and cause of this confusion which has persisted more than a decade after it was formally identified.

Methodology of Research

This research is the result of three phases of data collection. Each phase used somewhat different methodologies to develop the information upon which subsequent phases were built. While each is discussed in detail in Chapter VII, they are summarized here as follows.

During Phase One the City of Tampa's (Florida) construction regulatory-development management agencies were investigated by a team of graduate students directed by the researcher. The results of this summer 1977 work, part of a HUD grant, were transformed into flow diagrams and narratives which described the administrative-operational permitting processes then existent in Tampa.

Phase Two, which occurred in the fall and winter, 1977, was comprised of a nationwide data-gathering effort undertaken by the researcher as part of a joint University of Florida-City of Tampa field team. Eight jurisdictions which had been identified as being in the forefront of permitting and regulatory reform were visited by the research team. Their innovations were assessed and cataloged by the researchers.

Phases One and Two resulted in a "menu" of organizational-administrative innovations which, based upon field experiences, interviews with knowledgeable users, and reports in the literature, appeared to affect citizen access to and through permitting procedures in local building regulatory systems. These innovations, the dependent variables in this research, are divided in four sets depending upon their primary impacts upon various elements of the building regulatory process. These variables are:

Set 1. Administrative Review

- Contracting with private firms for plan review
- "Unified" permit application forms
- Cross-trained permit clerks
- Use of a 'Development Review Committee"
- Use of a preliminary plan review meeting

Set 2. Personnel Professionalism

- Cross-trained building inspectors
- Inservice training requirements for inspectors

Set 3. Client/Customer Information Access

- Provision of citizen information materials
- Use of a customer-service coordinator
- Use of a project coordinator
- Clarity of physical identifiers of plan review stations.

Set 4. Management

- Use of employee procedural manuals
- Computerized permit data processing
- Recent review of permitting procedures

Our independent variables, or the presumed "causes" of the above, are divided into the three sets previously mentioned--political, community, and organizational. These variables were selected as a result of our field research and a review of the literature (see Chapters V and VI) as some of the most important factors tending to affect the decision of localities to adopt the innovations identified in our dependent variable list. These independent variables are

Set 1: Political

- Formal Centralization of Power
  - Type of local government structure

* Autonomy of Agency Decision-Making
  - Perceptions of political interference with permitting process

* Distributive Regulation
  - Attitude of building official toward variable enforcement of codes

Set 2. Community (Socio-Economic)

* Growth
  - Population change 1970-1977

* Size
  - Population size

* Economic Competition
  - Perceived local economic competition between builders and developers

Set 3. Organizational

* Leadership Professional Orientation
  - Attitudes toward increased job entrance requirements for inspectors
  - Attitudes toward professional certification of inspectors
  - Perceptions of discretion levels for inspectors enforcing codes

* Organizational Slack
  - Percent agency budget covered by fees

* Organizational Boundary Spanning
  - Rating of how closely the agency works with the local planning department

Phase Three of the research, carried out during spring and summer, 1979, operationalized the dependent and independent sets in a questionnaire distributed to local building regulatory agencies across Florida. The responses from that questionnaire, gathered from almost 30 percent of the state's building departments, constitute the findings of this paper and are the bases of our conclusions.

Hypotheses and Propositions

As previously noted, a number of general hypotheses and specific propositions drive this research. The initial question is a broad one

Do building inspection agencies systematically differ in their treatment of clients, and if so, why? We believe that they do Based upon previous field research, we suspect that these differences are overtly manifested in certain organizational innovations (e g the dependent variables) which can be identified through survey Furthermore, we believe that different types of agencies will adopt (or not adopt) different types of innovations and that this may typify styles of behavior towards clients We think that these styles can be classified for explanatory and predictive purposes Moreover, we suspect that these styles are related to sets of political, community, and organizational variables which affect the propensity of local building inspection agencies to adopt the innovations we have specified

The following propositions were formulated to test the assumptions we have made:

Political Propositions

Centralization of power

P_1 The type of local government structure--council-manager, mayor-council, commission--is significantly related to building regulatory agency decisions to adopt administrative review, personnel professionalism, client information access, and management innovations

Autonomy of Decision Making

P_2 There is a significant association between building officials' perceptions of political interference with permitting processes and the propensity of their agencies to adopt administrative review, personnel professionalism, client information access, and management innovations

Distributive Regulation

P_3 A relationship exists between building officials' attitudes toward variable enforcement of building codes and their agency's adoption of administrative review, personnel professionalism, client information access, and management innovations

Community Propositions

Growth

P_4 Community population change between 1970 and 1977 is related to building inspection agency's use of innovative administrative review, personnel professionalism, client information access, and management features.

Size

P_5 There exists a significant association between community population size and the decision of building inspection agencies to adopt administrative review, personnel professionalism, client information access, or management innovations.

Economic Competition

P_6 Local economic competition between builders and developers, as perceived by the chief building official, is related to agency propensity to make use of administrative review, personnel professionalism, client information access, and management innovations.

Organizational Propositions

Leadership Professional Orientations

P_7 The professional orientations of agency chiefs, manifested in attitudes toward job entrance requirements, professional certification of inspectors, in-service training requirements and perceptions of inspector discretion levels, is associated with the tendency of their agencies to adopt administrative review, personnel professionalism, client information access, and management innovations

Organizational Slack

P_8 The adoption of innovative administrative review, personnel professionalism, client information access, and management innovation features in building inspection agencies is related to the extent that agency budgets are covered by generated permit fees.

Organizational Boundary Spanning

P_9 Whether or not a building inspection department works closely with the local planning agency has a significant association with its tendency to adopt innovative administrative review, personnel professionalism, client information access, and management features.

Synopsis of Remaining Chapters

In the following chapter, we place the building permitting process within its historical context. To do this, we trace the evolution of building codes from their earliest recorded origins in the Middle East through their use in the United States during the early part of this century

Chapter III continues the focus upon the evolution of the building code as the framework of permitting but emphasizes the legal and political development of codes in the United States This Chapter discusses four significant trends which have shaped present day building codes and the permitting processes which implement them

Following this, Chapter IV, describes the decisional flow which takes place within a typical modern building inspection agency Here we discuss each sequential phase of the permitting process using a flow model to illustrate the many regulatory steps involved from application to final inspection. We also present an interactive model of the public and private participants to permitting in order to illustrate the fragmentation on each side of the regulatory picture.

Chapters V and VI review the theoretical and empirical literature upon which our research is based. Chapter V presents a discussion of the broad scale theory which underlies this investigation it delineates classification schemes for studies of organizational innovation, identifying the present research within one such scheme it also spells out the political and systems theory which provide a general analytical framework for the independent variable sets we have chosen.

Chapter VI presents much more narrow gauge theory to buttress each of our hypotheses. Thus, each set of independent variables is broken down into its constitutent parts as we lay bare the reasoning behind our hypotheses. We summarize the Chapter with a matrix which depicts the relationships we expect to find after statistical analysis of the data.

The three-stage methodology of our research is profiled in Chapter VII, while Chapter VIII presents our findings and discusses them in light of our initial propositions.

Chapter IX presents our conclusions relative to the impact of the independent variables upon the propensity of local building regulatory agencies to innovate. Based upon our findings, we suggest avenues for future research in the field.

Notes

1 In a recent unpublished paper, senior American Planning Association research staff state that:

> Government is obviously not the monolithic entity that editorials rail against, but a loosely-connected collection of agencies from the local to federal level. This ad hoc 'system' has little or no vertical or horizontal integration. Land-use controls are extremely decentralized and by no means uniformly practiced. While regulations at any single jurisdiction may impose only moderate processing requirements, the cumulative affect may be a true problem.

Charles Thurow and John Vranicar. February, 1979. "Procedural Reform of Local Land Use Regulation." Paper presented at the Department of Housing and Urban Development Conference on Housing Costs, Washington, D.C., p. 5.

2. This breakdown was identified by the researcher while investigating the City of Tampa's development permitting systems. The phases correspond to the general chronological sequence of administrative-regulatory events through which new construction must pass. They are discussed, in relation to Tampa's particular problems in a contract document prepared for the City and the Department of Housing and Urban Development. See Earl M. Starnes, John F. Alexander, Richard H. Schneider. June, 1978. "Tampa Integrated Permitting, Inspections, Licensing and Development Monitoring Plan." Photocopied. Gainesville, Florida.

3. These reports derive from informal, first-hand discussions between the researcher and regulatory system employees and users, and are supported by a growing body of literature which is just beginning to systematically tap the data. See, for example, John Gardiner, Theodore Lyman. 1978. *Decisions for Sale: Corruption and Reform in Land Use and Building Regulation*. New York: Praeger.

4. The notion of typologizing different (agency) behaviors into *styles* stems from a growing body of studies which have sought to do this with other local government agencies in order to give us a comparative picture of their interactions with clients. Chief among these studies is the seminal study by Wilson. See James Q. Wilson, 1973. *Varieties of Police Behavior: The Management of Law and Order in Eight Communities*. New York: Anthenium.

   The construction of typologies by social scientists to communicate the flavor and form of behavior in public organizations has a lengthy history. Weber gave early impetus to this technique in his descriptions of the bureaucracy as compared to other types of human organizations. See Max Weber. 1957. "The Ideal Bureaucracy." In *Organizations and Human Behavior*, ed., Gerald D. Bell. Englewood Cliffs, N.J.: Prentice-Hall. 86-90.

5. The day-to-day clients, by and large, of the local building inspection department are architects, engineers, property owners, contractors, and sub-contractors. These individuals generally represent the higher socio-economic status levels of the community and thus can be expected to be frequent and ubiquitious political participants. See, for example, Lester W. Milbreath. 1965. *Political Participation*. New York: Rand McNally, on political participation. This is particularly true as land use and development-related controversies seem to embroil local governments at an ever increasing rate.

6. There seems to be something of a contradiction in the empirical literature. That is, although many studies are aimed at describing and analyzing how local urban political systems and bureaucracies do or do not respond to their poorest constituents, few studies are devoted to the functioning of demand channels and conversion processes for the "unyoung, unpoor, and unblack . . . the middle-aged, middle-class, middle-minded," who keep the systems going.

Richard M. Scammon and Ben J. Wattenberg. 1970. *The Real Majority*. New York: Coward-McCann, p. 21.

In fact, these two dimensions are closely related, especially in the building regulatory field. For example, if local manufacturing or trade interests are able to influence the legislative, policy-making, and administrative processes surrounding building codes so as to hinder or exclude cost-reducing innovation in building technology, they may substantially drive up the price of low-cost housing in their community.

7 This link between regulator and regulatee is common in the American experience at all levels of government. It becomes extremely problematical when the initial private socialization of the regulator is insufficiently offset by subsequent public-service oriented socialization.

8 Field and Ventre go on to point out that "Officials, apparently, serve at the pleasure of those who appoint them. Therefore, they are very sensitive to political pressure. Given the great uncertainty of their job status, the spirit of complaisance and the philosophy of 'don't rock the boat' are entirely rational."

Charles G. Field and Francis Ventre. 1972. "Local Regulation of Building: Agencies, Codes and Politics." In *The 1972 Municipal Year Book*. Washington, D.C.: ICMA, p. 139.

All further references to this work appear in the text.

9 This part of the "police powers" is granted by the U.S. Constitution to the states and subsequently delegated by them to local units of government. See the Florida Building Code Act of 1974, Chapter 553, Part VI, *Florida Statutes*. We deal with the legal aspects of local building codes in more detail in Chapter III.

10 U.S. Congress, Senate, Committee on Banking, Housing and Urban Affairs and the Committee on Veterans' Affairs, *Costs to Small Homebuilders of Federal, State, and Local Government Regulations*. Joint Hearing, 95th Cong. 1st sess., February 16, 1977.

See also, U.S. Congress, Senate, Select Committee on Small Business, *Effect of Government Regulation Upon Homebuilding and Related Construction*. Hearing, 95th Cong. 1st sess., June 1, 1977.

CHAPTER II

THE HISTORICAL FRAMEWORK OF PERMITTING BUILDING REGULATION AND CODES

Introduction

The permitting process in the United States takes place within the context of the building code--the law which shapes construction regulation. Such codes have a long history in human society, stretching back to antiquity. This Chapter traces the evolution of building codes and touches upon some principal forces associated with their development throughout the ages--specialization of labor, availability and cost of building materials, natural and man-caused disasters and building failures. These factors are still significant in the continuing evolution of modern-day building codes.

Historical Overview

Hammurabi's Legacy

It has been estimated that there presently exist about 14,000 individual communities across the United States which issue building permits (Cooke and Eisenhard 1977). About half of these jurisdictions--7,000--utilize building codes which are different enough from each other to warrant concern or attention from the public at large or from the construction industry. The reason for this is straightforward. Field and Rivkin note:

> Building code approval is a gateway through which all construction must pass. The code often stipulates what processes of construction are acceptable, and who can do specific jobs. Codes are thus powerful documents favoring certain ways of doing business and excluding others, which limits competition. (1975, p. 15)

Indeed, building codes have been "powerful documents" throughout history. And they have had a long history. The earliest recorded legal code includes six sections which survived the fall of the Babylonian Empire--The Building Code of Hammurabi (Figure 1).

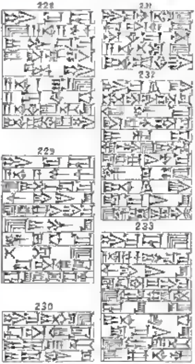
An analysis of its elements clearly shows at least four features common to modern-day building codes.

First, Hammurabi's law was obviously meant to regulate the economic considerations of building. As the Field and Rivkin quote above demonstrates, this remains today a significant, albeit sometimes hidden, aspect of building codes.

Second, the Babylonian Code provides sanctions against the builder should the construction fail either completely or in part. Modern codes do the same, although the remedies are not nearly as harsh, swift, or certain as in early times.

Third, the code sets minimum standards for structural integrity, that is, at the very least the housing ought not fall in. This anticipates by four millenia the advent of modern "performance" oriented building codes which seek to free builders from rigid "specification" formula.[1]

Fourth, and finally, Hammurabi's provisions clearly demonstrate a basic intent which, as we shall see, has not changed greatly over



228 If a builder build a house for a man and complete it, that man shall pay him two shekels of silver per sar (approximately 12 square feet) of house as his wage

229 If a builder has built a house for a man and his work is not strong, and if the house he has built falls in and kills the householder, that builder shall be slain

230 If the child of the householder be killed, the child of that builder shall be slain.

231. If the slave of the householder be killed, he shall give slave for slave to the householder

232 If goods have been destroyed, he shall replace all that has been destroyed, and because the house that he built was not made strong, and it has fallen in, he shall restore the fallen house out of his own material

233 If a builder has built a house for a man, and his work is not done properly and a wall shifts, then that builder shall make that wall good with his own silver. (Thallon 1978, p 105)

FIGURE 1
THE BUILDING CODE OF HAMMURABI, TRANSLATED (ca 1950 BC)

time. The code aims at protecting the public's health, safety, and welfare by policing the work quality of certain individuals. In so doing, it links together society's interests in space, structure, and behavior within a legal context. This concern is virtually universal in modern civilizations.

Hammurabi's Code is significant not only for its relevance to present-day building regulation but because it was one of the earliest attempts of a central government to control building on a site-specific basis. Throughout history building regulation, particularly as it affected the common folk, was also shaped by other factors such as specialization of labor, availability and costs of building materials, and perhaps most of all, by natural and man-made disasters.

Craft Guilds

From Caesar's time to the Middle Ages, collective labor, personified by craft guilds, played a major role in the regulation of building construction. That is because the guilds focused and directed the building process, largely unhindered by state or local government interference.

For example, Durant reports that the building trades were extremely well organized and specialized during Rome's Silver Age (AD 14-117). Then as now, the construction of a dwelling was split among many *collegium* or guilds:

> *Dendrophoroi* ("treebearers") cut and delivered the wood, *fabri lignarii* ("woodworkers") made houses and furniture, *caementarii* mixed the cement, *structores* laid the foundations, *arcuarii* built the arches, *parietarii* raised the walls, *tectores* applied plaster, *albarii* whitewashed it, *artifices plumbarii*

> inserted the plumbing--usually with pipes of lead (plumbum), and *marmorarii* paved marble floors; we may imagine the jurisdictional disputes (1944, p. 322)

During Aurelian and Diocletian's era (270-305 AD), a forceful attempt was made to bring the building *collegium*, along with other industrial guilds, under the control of a new corporate state which had been forged. It worked for a short time. During this period, the guilds essentially became organs of government. As its administrative agents, they controlled their own membership through taxation and the regimentation of labor. In return they received government privileges and were allowed to exert considerable influence on the direction of the Empire's policies (Durant 1944).

Some of Rome's *collegium* survived to beget the medieval building guilds. In Europe the merchant and craft guilds thoroughly dominated construction in the medieval town. They did so because they "regulated wages, hours, conditions of labor, terms of apprenticeship, methods of production and sale, prices of materials and wares" (Durant 1950, p. 634). Moreover, each of the guilds very carefully guarded its craft's secrets, protecting itself against outsiders and against government interference.

It came as some surprise therefore when some medieval communities began to regulate the heights of buildings by ordinance. This was done in response to wealthier townspeople who, in protective forethought, choose to live as close as possible to the castle. Consequently, buildings in near proximity to the castle "rose to several stories, sometimes six, and the upper floors projected charmingly and alarmingly over the streets" (Durant 1950, p. 643). It took only a few modest disasters to convince town leaders that the situation merited change.

Building Materials

In many cases throughout history, the course of building control has also been dictated by the availability, cost and durability of local building materials. For example, among many cultures stone and brick have been energy intensive materials beyond the reach of the average person's pocketbook.

Durant points out that, among the ancient Egyptians, "stone for building was too costly for houses, it was a luxury reserved for priests and Kings" (1954, p. 184). Even the nobles could not afford it and were forced to have their homes built of lesser materials. Consequently, despite all the palaces they built along the Nile during the time of Amenhotep III, not one remains although the "abodes of the gods and the tombs of the dead [Kings]" still stand (Durant 1954, p. 185).

To keep track of the expensive materials which went into the construction of the pyramids and like monuments, a "clerk-of-the-works" was employed as a scribe. The clerk was the world's first building inspector insomuch as his job was to count the materials brought to the job site to make sure that the owners (the state) were not cheated.[2]

Natural and Man-Made Disasters

In many locales, construction was regulated more by the forces of nature than by the government. In early Japan, for instance, building was limited in size and scale because of the ever-present threat of earthquakes.

> For the demon of earthquake has willed that Japan should build on a timid scale, and not pile stones into the sky to crash destructively when the planet wrinkles its skin. Hence the homes are of wood and seldom rise beyond a story or two. . . .(Durant 1954, p. 856)

Japanese nobles, piqued at not being able to lift monuments to themselves high in the air, settled at spreading them across the countryside. They did so despite an imperial edict (circa 594 AD) which prohibited dwellings to expand beyond 240 square yards.[3]

It is clear that building disasters, whether caused by natural forces or human incompetence played a major role in the evolution of building regulation. Indeed, some writers suggest that they are the principal reason that codes have evolved at all. A look back at Hammurabi's code seems to justify this, as does a review of more recent regulatory ventures.

Fire hazards

The Anglo-American experience with building controls seems to support the above contention. The first code enacted in the United States prohibited the colonial craftsmen of Plymouth Colony from making roofs out of thatch because of the fire hazard (Thallen 1978). That 1630 law was prompted by a blaze which wiped out part of the colony the previous year. A subsequent regulation passed by Boston's lawmakers in 1652, reacted to the spread of an epidemic by requiring privies to be separated from the public street by at least a dozen feet.[4]

Fourteen years later a much larger calamity swept the mother country's major city. The Great Fire of London consumed thousands of the wood frame houses which dotted the city. Started in a baker's shop in Pudding Lane, the fire took three days to run its course. When it abated, two thirds of London was in ruins and architecture, planning and building were given an "opportunity unprecedented since the burning of Rome" (Durant 1950, p. 264). Since King Charles II could not afford Christopher Wren's grandiose design for reconstructing the city at once, the government had to settle for a less majestic, more financially prudent course of action. The city chose to slowly rebuild itself, guided in the construction by royal order. The "Act for Rebuilding the City of London," part of which is reproduced below, is a landmark in the development of building regulation. There are no more comprehensive codes in history until the present day.

> Forasmuch as the city of London, being the imperial seat for his Majesty's kingdoms, and renowned for trade and commerce throughout the world, by reason of a most dreadful fire lately happening therein, was for the most part thereof burnt down and destroyed within the compass of a few days, and now lies buried in its own ruins; for the speedy restoration whereof, and for the better regulation, uniformity and gracefulness of such new buildings as shall be erected for habitations in order thereunto, and to the end that great and outrageous fires (though the blessing of Almighty God) so far forth as human providence (with submission to the divine pleasure) can foresee, may be reasonably prevented or obviated for the time to come, both by the matter and form of such buildings; and further, to the intent that all encouragement and expedition may be given unto, and all impediments and obstructions that may retard or protract the undertaking or carrying on a work so necessary, and of so great honour and importance to his Majesty and this kingdom, and to the rest of his Majesty's kingdoms and dominions, may be removed,

> II Be it therefore enacted by the King's most excellent majesty, by and with the advice and consent of the lords spiritual and temporal, and commons, in the present parliament assembled, and by the authority of the same, that the rules and directions hereafter in this act prescribed, be duly observed by all persons therein concerned. (19 Car. 2, 1666)[5]

This is followed by detailed regulations for which the following are some of the section headings

"Prevention of irregular buildings'

'There shall be four sorts of buildings only"

"Powers of the lord mayor and aldermen and common council to declare streets, lanes, etc "

'Building with brick, stone, oak'

"The duty of surveyors and supervisors"

'How houses fronting on high streets shall be built'

'Who may determine differences between builders and stopping lights etc.'

'Noisome trades prohibited in the high streets"

"What streets may be opened and enlarged"

"A scheme or proportions and scantlings for stories, walls, and timbers for building of lesser and larger houses within the city of London

"General rules for building"[6]

What the Great Fire of London did for the advancement of building regulation in England, the San Francisco Earthquake helped do for the United States in the promulgation of national fire safety and structural codes

Indeed, as noted above relative to colonial Plymouth, it has been the threat and fear of fire which instigated much of our early concern in American with building regulation. For example, Comer notes, concerning the foundation of modern building controls in New York City, that, 'from 1800 to 1916 the control of building operations originated in connection with fire control' (1942, p. 8). This concern is ubiquitous in present-day building codes and code enforcement. So much so that the influence of fire safety regulations has come under attack by architects and designers because of its alleged stifling impact upon design creativity, especially in multi-family housing.[7]

Fire safety concern had a direct impact upon the advent of "model" building codes in the United States. The first such code--the National Building Code--was drafted in 1905 by the National Board of Fire Underwriters (now the American Insurance Association) in response to severe fire losses. Although designed as a guide for estimating fire and hazard insurance premiums, it is more historically significant as the first attempt to promulgate a nationwide building code.

Individual Building Failure

Individual building failure too, though more rare than fire and natural calamities, also played a significant role in the increased sophistication of building code development and promulgation. As McKaig notes, "Building construction has been dotted with failure from the earliest days of history. Most of the failures have been forgotten, but because of them mankind has learned to build more safely" (McKaig 1962, p. 1).

Such calamities as the Bixby Hotel collapse (1906, Long Beach, California) and the Brooklyn Theater failure (1921, Brooklyn, New York) so inflamed the public, and embarassed the building and design professions, that changes were made or proposed in the codes which might not have occurred otherwise.[8] Moreover, such disasters--particularly when they occurred in smaller communities--often initiated the adoption of entire components of the building regulatory process.

For example, the collapse of the floor of the Shanhouse and Sons factory in Rockford, Illinois (November, 1915), causing two deaths, spurred that city to adopt a building ordinance to cover concrete construction and hire a qualified building inspector to enforce it.[9]

McKaig attributes most such failures to man's "ignorance, carelessness, or greed" (1962, p. 4). Whatever the reasons, building failures, like natural disasters helped spur increased public awareness of the necessity for more stringent building regulation. This awareness crystallized in the legal and political evolution of American building codes.

The following chapter traces some of the more important trends associated with the legal and political development of codes and code administration in the United States.

Summary

This Chapter has provided a brief historical overview of the early history of building regulation and codes, and has pointed out three of the major factors which have helped shape their evolution over the centuries. These factors--specialization of labor, availability and costs of building materials, and natural and man-caused disasters--remain important in code development, promulgation, and enforcement in modern times

Notes

1. There are two general types of building regulations--specification and performance codes The first type, the specification code, is by far the more widely used It spells out in detail the minimum standards to be followed by the engineer, architect or builder. Because of this, the specification code is similar to an engineering handbook, crammed with items such as instructions as to the thickness of walls fabricated out of particular materials, the amount of fire proofing required, and the strength of reinforcing steel bars to be used in foundations

   In contrast, a performance code is a far more flexible document. It regulates construction based upon the forces and conditions to which buildings are subjected--wind, fire, earthquakes, "live" and "dead" loads--and certifies forms of construction based upon their proven ability to withstand these forces and conditions. Because this type of code avoids pinpointing specific types of materials or construction techniques, the performance code is much more tolerant of new materials or innovative construction techniques. However, this tolerance makes the performance code highly unpopular in most local jurisdictions, where the building code generally is designed to be a conservative law which protects, by its specificity, local industries and trades.

   Although seldom used by localities, the performance code concept is the darling of code reform advocates. Its receptivity to innovation is seen as one means of ultimately lowering the costs of housing Indeed, the increased promulgation of performance codes was a key recommendation of the National Commission on Urban Problems (1968) in their report. See U.S. Congress, House, National Commission on Urban Problems, Building the American City Report to the Congress and to the President of the United States, 91st Cong. 1st sess , December 12, 1968.

   All further references to this work are in the text

2. See O Brien for a synopsis of the evolution and role of the building inspector.

   James J O'Brien. 1974. Construction Inspection Handbook New York: Van Nostrand Reinhold

3. Durant's verbal embroidery on the mind and art of early Japan is fascinating His brief section on ancient Japanese architecture is especially worthwhile.

Will Durant. 1954. *Our Oriental Heritage*. New York: Simon and Schuster, pp. 894-896.

4 Moriarty offers a number of historical tidbits relative to the link between disasters and resulting building regulation.

Paul J. Moriarty. 1978. "Legal Aspects of the Building Regulatory Process." In *Research and Innovation in the Building Regulatory Process*, ed. Patrick W. Cooke. Washington, D.C.: U.S. National Engineering Lab.

5. For additional historical and legal details on this Act, see Jacob H. Beuscher, Robert R. Wright, Morton Gitelman. 1976. *Land Use, Cases and Materials*. 2nd Ed., St. Paul, Minnesota, West Publishing Company, pp. 6-7.

6 Ibid., pp. 6-7.

7 This point is forcefully made by Gauchat and Schodek relative to multi-family housing. They state:

> More by default than by intent, [fire] regulations have gone beyond regulating that which they are intended to control. They tend to implicitly favor certain building design solutions over others. In the field of housing, regulations have had a profound effect on the type of housing design which is promulgated all over the country. In fact, the whole character and nature of the housing stock has been biased.

Urs P. Gauchat and Danial L. Schodek. September, 1978. "Design by Regulation: The Case of Multi-Family Housing." Publication A-7906. *Harvard Graduate School of Design Publication Series in Architecture*, p. 1.

8. McKaig has cataloged a wide range of construction failures which illustrate the interplay of structural and human error. See Thomas McKaig. 1962. *Building Failures: Case Studies in Construction and Design*. New York: McGraw-Hill.

As of this writing there has been a spate of recent building failures in the United States--most notably of large scale projects such as stadiums, civic centers and auditoriums. For example, on August 13, 1979, the roof of an $8 million, four-story stadium in Rosemont, Illinois, came crashing down, killing five workmen. Earlier during the summer of 1979, a 300-by-400-foot section of the Kemper Sports Arena in Kansas City collapsed. Much to the chagrin of the architect, that unfortunate event virtually coincided with his receiving a national architectural award for the building's design. Finally, on January 18, 1978, the roof of the Hartford, Connecticut, Civic Center caved in under the weight of ice and snow which had accumulated during a heavy storm.

It should be noted that the Kemper and Hartford failures took place after their completion. In most cases, however, failures happen during construction since the greatest building stresses tend to occur at that time. McKaig notes, relative to that point, 'Unless someone is killed or injured, many of these failures are not written up in the technical magazines, they may not even receive notice in the local papers.' (1962, p. 2)

9 Ibid., pp. 27-28

CHAPTER III

LEGAL AND POLITICAL EVOLUTION OF BUILDING CODES IN THE UNITED STATES

Introduction

The legal and political evolution of modern-day American building codes is marked by four significant features and trends These are

1. The traditional localism of building regulation in the United States,
2. The historical intermingling of construction codes with housing, health and life-safety laws,
3. The growth of model codes, and
4. The increasing federal involvement in building regulation

This chapter discusses these facets of building codes in order to lay the contextual framework for the present research

Before we proceed to discuss each of these in more detail, it would be well to sharpen our focus upon our topic That is because we are about to enter into an area of considerable academic and professional confusion. This is due to the lack of agreement upon the definition of our subject, and is related to points one and two above,

For example, Hagman notes that the term "building codes" is not often used with much precision.[1] This is an understatement Almost every local ordinance and many authoritative texts seem to grapple with the concept somewhat differently. To some, the building code means all construction regulation moving "inward from the outside skin of a building" (Hagman 1971, p. 277). This may include codes governing both new construction and existing housing. To others this dimension includes health, life-safety, noise abatement, historic preservation and related laws. Still others might include land development and planning regulations.

In truth, there is no single, ultimate definition of the "building code." While our field research is limited to that part of the law (in Florida, at least) that deals with the regulation of new construction and associated electrical, plumbing, and mechanical systems, we are cognizant that many other components may be considered part and parcel of the "building code," depending upon the jurisdiction, the ordinance or the textbook. Our concern, however, is primarily with the major system components noted above. That does not mean we overlook the collateral parts; we merely minimize them at this point because of time and cost constraints. One reason for this is clearly demonstrated by our field research.

For example, Florida building inspection officials were asked to identify the number and types of functions their agencies performed. The mean number of different building and development regulatory duties for the 135 respondents was 17.8; more than 43 percent of the reporting agencies (59) noted that they performed 20 or more different regulatory tasks. Although each community handles the matter somewhat differently, virtually all of these responsibilities are lumped under the local "Building Code" ordinance. This can cover anything from the four basic construction system components listed above to moving permits, parking lot approvals, lighting efficiency inspections, and even animal control permits.

With this caution in mind, we will proceed in our discussion. If anything, it should emphasize the overriding localism of the building regulatory function in the United States. We now turn to that aspect.

Localism

Although a trend has been developing toward increased federal and state involvement in building regulation, most of this activity remains a local responsibility.[2] This is true for all phases of building regulation--code development, promulgation and enforcement--even though reliance on national "model codes" has grown since the period following World War II. Despite this reliance, the American emphasis on local building regulation has persisted since the days of Plymouth Colony's roofing law.

In contrast, a number of European nations have developed more or less centralized systems of building control. In the United Kingdom, for example, national regulations are issued for England, Wales, and Scotland and an entirely separate law governs Inner London (a result of the Great Fire). It is up to the municipalities, however, to enforce these laws. In the Soviet Union the central development of standardized designs and legally binding standards demand local adherence. And in Scandinavia, national regulations tend to blanket not only building activities but pertain as well to land ownership, development, and the inspectional powers and procedures of locally-based administrators.[3]

The reasons for the local focus in the United States are principally two-fold First, the federal system of government has strongly encouraged the dispersion of certain regulatory powers within state and local boundaries. Second, the geographically scattered and historically fragmented construction industry has encouraged localities to retain their jurisdiction over building regulation.

Federal and state involvement

With some notable exceptions to be discussed later, the federal government, until very recently, has not shown much interest in regulating construction. Although under the Supremacy Clause of the Constitution it certainly has the authority to do so, it has not yet attempted to preempt the states' building regulatory functions. It is accepted, rather, that the prerogative was wrapped within the bundle of authority reserved to the states by the Tenth Amendment to the United States Constitution and passed to them along with other "police powers." Rhyne points out that:

> The police power is the source of all authority to enact building codes It has never been very exactly defined, and indeed, the United States Supreme Court has said it is 'incapable of any exact definition.' Broadly speaking, it is the power of the state to legislate for the general welfare of its citizens (Rhyne 1960, p. 7)

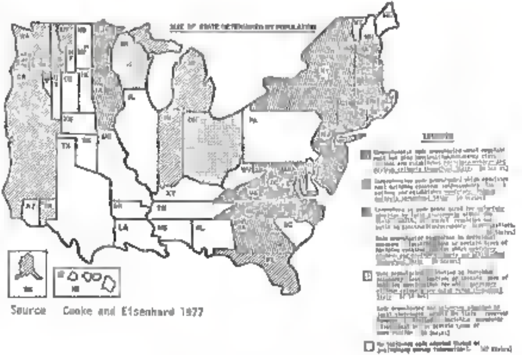
The states, in turn, have generally delegated this power to localities--counties and cities. They have done so because most state governments have been historically unable or unwilling to administer regulatory programs which, at least on the surface, require enormous variations in standards across wide geographic and economic-political areas. The United States is not unique in this regard. This seems to be a phenomenon of federal systems generally. For example, the Economic Commission for Europe points out that nations which have a federal system of government or which have strong local autonomy, principally the Federal Republic of Germany, the Netherlands, Switzerland, and the United States, do not have uniform building regulations.[4]

The most recent (1977) comprehensive survey of state and local building codes in the United States reports that, although a few states have adopted mandatory statewide codes which allow no jurisdictional variation, the great majority of states have taken a much *less* centralized, comprehensive approach (Cooke and Eisenhard 1977).

The situation *between* states is even less coordinated relative to code development, promulation and enforcement. This is so despite efforts on the part of new organizations--National Institute of Building Sciences (NIBS), The Council of American Building Officials (CABO), and the National Conference on States on Building Codes and Standards, Inc. (NCSBCS)--to promote interstate and interlocal cooperation and reciprocity relative to codes and standards. Figure 2 illustrates the hodgepodge of regulatory systems which exists across state lines, making coordination efforts all the more difficult.

Within states, one of three fundamental approaches to the building code problem is generally used. These are:

1. Complete local autonomy,
2. Optional local adoption of a state building code, or,
3. Mandatory local adoption of a state building code.


SIZE OF STATE DETERMINED BY POPULATION
LEGEND
WA
OR
CA
ND
CO
TX
AZ
MO
IL
KY
TN
AR
LA
MS
AL
OH
PA
WV
VA
SC
FL
NH
ME
AK
HI

Source Cooke and Eisenhard 1977

FIGURE 2
STATEWIDE BUILDING REGULATIONS.
STATUS OF STATE BUILDING CODES ADOPTED IN THE U S

Variations on these themes include cases where states require certain types of structures, particularly those which are publically owned or constructed, to follow the guidelines of an accepted model building code (e.g. Missouri--Basic Building Code, Nevada--Uniform Building Code, Mississippi--Standard Building Code), or where a state mandates local governments to meet or exceed some minimum state code requirements (e.g. California, Washington, Idaho, Montana, New Mexico, and Indiana), or, finally, where a state retains absolute control over some specialized building component, such as the mechanical system, elevators, or manufactured housing (e.g. Iowa, North Carolina, North Dakota, Oklahoma, Texas, and Utah, among others) (Cooke and Eisenhard 1977).

By and large, however, most states (27) have opted for the first approach indicated above--complete local autonomy, at least relative to adoption of a statewide building code. This situation is closely linked to the nature of the construction industry in the United States.

The construction industry in the United States

One of the most important reasons for the historical localism of building regulation in the United States is that it is politically and economically tied to the type of industry it controls. As Field and Ventre point out, the building industry is and always has been "highly fragmented, area-specific, decentralized, small scale," in nature (1971, p. 139). This is particularly true for that segment which is responsible for residential construction, a major portion of the industry and the one which most concerns us here.

Despite the existence of a few national and international construction firms based in the United States, construction generally and homebuilding in particular have been traditionally fields for the small and independent business. As the Senate Select Committee on Small Business pointed out in its 1977 hearing on the impact of government regulation upon construction,

> No builder in this country builds more than one percent of the homes. Over 80 percent of the homebuilders have gross receipts of less than $250,000. Building has been one of the great strongholds of small enterprise in the economy. In manufacturing, by contrast, the top 200 firms control almost 70 percent of the total assets. (1977, p. 2)

The major reason for this is the complexity of the building process itself. One home, for example, consists of a multiplicity of systems--electrical, mechanical, plumbing, structural--all of which require a specialization of skills and expertise for proper installation. Moreover, this does not include many of the other components of house building such as the masonry work, roofing, fencing, landscaping, grading, installation of special features (e.g. swimming pools), and other luxury items. Each system and each component has had its own local industry and trade association grow up around it.

This specialization of labor is much akin to that which occurred during Rome's Silver Age, where the many *collegium* converged to erect a dwelling. In our day, the fragmentation is even more complete since construction is far more complex and since each contracting and subcontracting specialty has developed an extensive, sometimes cross-cutting network of materials, manufacturers and suppliers. And, each has a significant economic stake in the development, promulgation, and enforcement of the laws which govern construction.

Thus, the building code can be a significant instrument in local income distribution and redistribution. As such it is both a technical and political document.

There is one simple, yet classic, example of this bifurcation. That is the "plastic pipe" controversy which erupted in the 1960's.

While the earliest plumbing systems were constructed of lead, wood or masonry tubing, these eventually gave way to cast-iron or copper pipes. Both were tougher and more durable than the former materials. They were, however, relatively expensive to produce and labor intensive in their installation. This did not displease their manufacturers or the local trade unions which trooped out platoons of plumbers to hook them up.

What did displease both manufacturers (primarily those who produced cast-iron pipes) and labor unions alike was the attempted introduction in the 1960's of polyvinyl chloride (PVC) and acrylonitrile-butadiene-styrene (ABS), or plastic pipe, as an alternative connective materials for plumbing drain, waste, and vent systems. Plastic pipe is as effective a conduit as the other materials even though in operation, it may be somewhat noisier. Moreover, it is cheaper to produce than cast-iron, and it is extremely light, portable, and therefore easy to manipulate. Its installation requires far fewer workers and much less expertise than that needed for cast-iron piping.

Consequently, when plastic pipe was first introduced at the national level, a fire storm of protest swept the country. Fanned by the entrenched materials manufacturers, the flames spread quickly to their clients, the local labor organizations which perceived the threat to their membership. The fight centered upon local building codes since they are, by and large, the arbiters of what materials can or cannot be used in the building process.

Labor and materials manufacturers representatives descended upon local building and legislative officials and lobbied strongly for their interests. In some cases PVC-ABS partisans were successful in having the local code amended to embrace their product. In other communities local trade associations were able to argue convincingly for the status quo.

A 1970 survey of communities which prohibited specific construction innovations provides the most recent data on the outcome of the battle. Of 826 cities reporting (or 47 percent of those surveyed), 71.3 percent of those communities which used local codes rather than state or model codes continued to prohibit the use of plastic plumbing pipe. Of cities more linked to a wide code jurisdiction at the state level for example, only 49.6 percent refused to allow PVS or ABS pipe. The lowest prohibition rate, 42.9 percent, was found for cities which relied upon one or more of the national model codes.[5]

As Field and Ventre note:

> The intensity of the fight is attested to by the building officials themselves. In 51.7 percent of those communities which allow the use of plastic pipe, the chief building official said it was the most difficult change to effect. In 34 percent of all communities which prohibit the use of plastic pipe, the chief building officials expected it to be the most difficult change to effect (1971, p. 145).

The plastic pipe controversy still rages in many communities today. It is but one example of a technical innovation with economic impacts that has stirred pitched political battles around the local building code.[6] Indeed, the local building code has been consistantly identified in the literature as one of the greatest inhibitors to the diffusion of construction innovation and change across the nation. Obviously, however, it is not the code itself which stops innovation, but the political and economic culture in which the code is embedded.

This is reiterated by interest groups pushing for specific substantive or procedural code changes. Among the most vocal groups have been manufacturers of pre-assembled housing systems who are barred from wide-spread markets by the idiosyncracies of local codes. One stated that 'building codes are dictated by or written by building trade union people," and other said that "home areas are controlled by local contractors that won't allow city council(s) to bend" (Field and Rivkin 1975, p. 79). Moreover, they constituted "protection of the local builders or subcontractors by the municipality" (Field and Rivkin 1975, p. 79).

This pattern, as noted above, may be particularly true when the code is more a local product as opposed to one based upon a state or national model. But even when the latter situations apply, there is nothing to prevent amendments which bar competition from "external" firms or contractors.

Florida, which enables counties and municipalities to adopt building, plumbing, electrical, gas, fire, safety and sanitary codes under Section 163.295 *Florida Statutes*, and which now requires *minimum* codes for each such jurisdiction under the Local Government Comprehensive Planning Act of 1975, Chapter 163, Part II, Florida Statutes, allows great variation from locality to locality.[7] This is so despite the widespread adoption of the Standard Building Code (SBC).

For example, our research reveals that 81.6 percent of the building inspection agencies surveyed (111 agencies) reported that their communities use the SBC as their local building code. Approximately 17 percent (23 agencies) say that unique local codes are being used.

However, when asked the extent to which the model code was amended to "fit local interests/concerns/purposes," only 18.4 percent, or 25 agencies, reported that no local amendments were introduced. The great majority of those responding, 76.7 percent (92 agencies), said that the model code had been amended to some extent. In a number of cases, 17.7 percent (24 agencies), changes were reported to be moderately extensive to very extensive in nature.

Code localism thus persists in Florida as it does across much of the nation despite efforts by manufacturers to secure wider, more easily accessible markets and contrary to attempts to promote interlocal cooperation and reciprocity.

Besides the influence of a federal system which promotes diffusion of power, and the fragmented nature of the construction industry, localism is also related to the historical evolution of differing codes within communities. While this evolution may be seen as a byproduct of the forces of federalism aided by a splintered construction industry, it has been a force on its own which further complicates code development, promulgation, and enforcement processes.

Historical intermingling of codes

With some exceptions in the United States, the advent of building construction regulations generally preceded that of local land-use planning and zoning control.[8] What the latter sets of regulations sought to achieve on a systematic, widespread scale relative to public health, safety and welfare, the former sought on a far more individual, site-specific basis.

Perhaps this can be attributed, in part at least, to a rather localized view of the role of government in the everyday affairs of the governed. That is, the power of government as intervenor on behalf of either the citizen or society as a whole has been traditionally confined to problem areas which are readily identifiable. As Huitt would probably assert, the range of government meddling is limited by the 'political feasibility' of articulating or attempting to solve the problem as it is perceived (1968, p. 274). Thus, policy-makers are more likely to deal with conventionally and publically accepted problems than to stir up or take on new and potentially dangerous ones.

For example, building regulations, as they evolved in the larger American cities, dealt with some of the component pieces of the urban system which could be easily and undisputedly singled out--indeed, which stood out--as areas of concern. Buildings caught fire, buildings fell down, buildings were the locus of significant trade and economic activities. It was not until more wholistic pictures of the city began to evolve, such as those proposed by Park, Wirth, and others of the Chicago School, that planning and zoning became more accepted as legitimate governmental activities.[9] Thus, as the health, safety, and welfare issues of the urban system began to emerge both theoretically and in reality (e.g. as the United States became more urban than rural in the 1920's), the responsibility of government to regulate a wider scope of urban activity through land use and zoning controls became more widely accepted by the public and policy makers alike.

This is not to say that such issues did not exist prior to the 1926 validation of zoning by the United States Supreme Court, but rather they were handled on an entirely different scale.[10]

That scale was measured in terms of the individual building. It aimed at laying out minimal health, housing, and life safety provisions which would correct or prevent the most flagrant abuses of slumlords in the nation's largest cities. In some cities, such as Boston and New York, the abuses were so intolerable that they demanded legislative remedy. The resulting laws, the first systematic attempts to ameliorate health conditions within existing urban housing, later became inextricably bound up with the regulation of new construction in these communities, and subsequently, throughout the nation.

Early American housing codes. In 1850, the Sanitary Commission of Massachusetts published its recommendations to "prevent or mitigate the sanitary evils arising from over-crowded lodging houses and cellar dwellings" (Thallon 1978, p. 105). This action set the stage for the nation's first significant urban housing legislation, New York's Tenement House Act of 1867.[11]

Though not framed in the technological jargon which marks the modern-day housing or health codes, the law required landlords to provide certain amenities by specifying that: (1) sleeping rooms be ventilated, (2) a water closet be provided for every twenty occupants, (3) the dwelling be kept clean to the satisfaction of the Board of Health, and (4) stairways be equipped with bannisters (Thallen 1979)

The New York Tenement Act became a model from which other cities borrowed in an attempt to control the outrageous practices of slumlords and landlords of the nineteenth century While the adoption of housing regulation was largely a phenomenon of large central cities, having little impact on small cities until well into the twentieth century, there was, nevertheless, a gradual diffusion of the principle across the nation (Friedman 1968). In those middle-sized cities which came to adopt housing codes patterned after New York's, the enforcement of such law was generally handed over to the only existing city agency with directly regulated structures--the building inspection department Moreover, the initial development of such ordinances was generally targeted within the existing building code, which was designed to regulate *new* construction

Blending of codes Later on, in the 1960's and 1950's, when the financial involvement of the Federal Government in housing, urban renewal, and redevelopment became explicit, the involvement of the nation's small communities in housing codes and enforcement increased substantially. For example, the Housing Act of 1954 required communities to develop "workable programs" in order to become eligible for funding, listing housing codes as possible components of programs. By 1954, housing codes were made prerequisites for federal funding, a major incentive for smaller cities to become active in that area of the law.[12]

A consequence of this has been a blending, in many communities, of the laws and enforcement powers regulating both new and existing construction. This causes a significant problem for these scholars who would seek to make legal or administrative comparisons between and among communities, and for the communities themselves relative to providing appropriate guidelines for such relatively new areas of interest as neighborhood preservation or the rehabilitation of existing housing structures.

For example, workable rehabilitation standards for existing housing are extremely difficult to achieve in many cities because the code relied upon is geared primarily to new construction, and not suitable for older structures.[13] Consequently, the cost of rehabilitating existing buildings can drive their rental or sale value beyond the reach of the population intended to be housed. This is an example, perhaps, of a "counterintuitive" result of otherwise logical thinking and action.

A significant push toward rationalizing and standardizing codes across jurisdictions is the subject of our next section. The model code movement stands out, among all other private efforts, as the major coordinative venture in the history of American building regulation.

Growth of the Model Codes

Of the more than 7,000 building codes in the United States, it is estimated that the great majority are based to some degree, on one of the four "model codes" developed by private rather than government organizations. With 919 cities responding to their survey, Field and

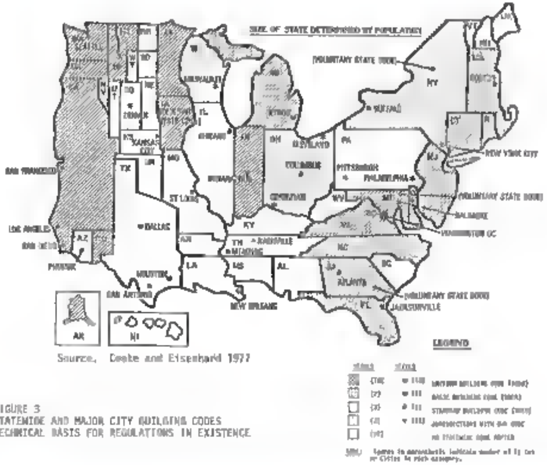
Ventre found that 72.8 percent subscribed to one of the four models, 13.5 percent used a state code, and 10.8 percent relied on locally drafted codes (1971, p. 143).

In the United States there are six organizations which publish model codes. Four of these codes--National Building Code of the American Insurance Association (AIA), Basic Building Code of the Building Officials and Code Administrators International (BOCA), Uniform Building Code of the International Conference of Building Officials (ICBO) and the Standard Building Code of the Southern Building Code Congress (SBCC)--are considered to be comprehensive in that they cover all building-related systems and functions. Two organizations--the National Fire Protection Association (NFPA), and the International Association of Plumbing and Mechanical Officials (IAPMO)--publish specialized, single purpose codes, the National Electrical Code and the Uniform Plumbing Code, respectively.

Of all the model codes only one, the National Electrical Code, has gained nationwide acceptance in the United States. The others tend to be rooted in relatively distinct geographic areas (see Figure 3).

As noted previously, the model code movement was initiated by the National Board of Fire Underwriters with the drafting of the National Building Code in 1905. However, it did not gain momentum or widespread acceptance until the period following World War II.

After the War, the great migration to suburbia swept the United States. The demand for single-family, detached dwellings rose to an unprecedented peak and developers and housing system manufacturers


SIZE OF STATE DETERMINED BY POPULATION
SEATTLE
SAN FRANCISCO
LOS ANGELES
SAN DIEGO
PHOENIX
AZ
AK
HI
DENVER
KANSAS CITY
TX
DALLAS
HOUSTON
SAN ANTONIO
MO
ST LOUIS
AR
LA
NEW ORLEANS
MS
AL
TN
MEMPHIS
NASHVILLE
KY
IL
CHICAGO
MILWAUKEE
WI
IN
INDIANAPOLIS
OH
CLEVELAND
COLUMBUS
CINCINNATI
DETROIT
PA
PITTSBURGH
PHILADELPHIA
WV
NC
SC
GA
ATLANTA
FL
JACKSONVILLE
(VOLUNTARY STATE CODE)
NY
BUFFALO
NEW YORK CITY
NJ
CT
RI
BOSTON
NH
VT
ME
BALTIMORE
WASHINGTON DC
LEGEND
UNIFORM BUILDING CODE (ICBO)
BASIC BUILDING CODE (BOCA)
STANDARD BUILDING CODE (SBCC)
JURISDICTIONS WITH OWN CODE
NO STATEWIDE CODE ADOPTED

Source, Cooke and Eisenhard 1977

FIGURE 3
STATEWIDE AND MAJOR CITY BUILDING CODES
TECHNICAL BASIS FOR REGULATIONS IN EXISTENCE

were hard-pressed to keep pace. A major hinderance was the multiplicity of locally drafted codes, each with its own requirements and standards. For a builder who only did business in one jurisdiction, this presented no real problem. But for other, larger firms, whose markets spanned several jurisdictions, the code inconsistencies were untenable. To the small and medium sized cities arrayed on the fringes of major core communities this situation was equally troubling.

That was because they were undergoing intense pressures for growth and expansion. New urban places, carved out of the hinterlands, were springing up around them, flooding local schools and draining municipal services without contributing anything to the tax base.

As a result of this pressure many small and medium sized cities discarded the older, locally drafted codes and adopted one of the model codes. To them the model code represented one method of attracting developers to build within city limits. Moreover, the code organizations were a convenient source of technical expertise which could be tapped for a relatively nominal fee. These communities did not have (and still do not have) the time, staff, or resources to develop codes adequately to cope with all the subtle nuances of new construction techniques.

It is noteworthy that the model code organizations responded to these needs in the types of codes they produced. Thus, even to this day these codes are low-density and suburban in orientation.

During this period of rapid change in the suburbs, many of the nation's larger cities held to their own locally-designed code systems. This was (and is) due to three reasons.

First, big cities tend to have their own technically competent staffs to develop and promulgate codes. Indeed, as with other municipal bureaucracies, there is a direct correlation between city size and the number of building inspection personnel. Our own data on Florida agencies bear this out. When sorted by population size, the mean number of building inspectors in each size category is depicted in Table 1.[14]

The second reason large cities tend not to use the model codes is that, because of their suburban orientation, they do not address highrise construction. Consequently, big cities have developed their own specialized building codes, although many have also adopted one or more of the national specialty codes as well. Cooke and Eisenhard's investigation of building regulations in the United States documented the code structure in 30 major American cities (1977). Of this number, 15 had opted for their own codes. These included Atlanta, Baltimore, Chicago, Cleveland, Denver, Jacksonville, Los Angeles, New York, Philadelphia, Pittsburgh, and Washington, D.C.

The third and final reason for the retention of local rather than model codes by large cities is related to economic and political considerations. Larger cities tend to be more heterogeneous, both in population and in economic function, than smaller communities. Consequently, there are many local groups--trade unions, materials suppliers, contractors and subcontractors--who have significant vested interests in the specifications of a code.[15] Because of this many have strongly opposed delegation of the code development power to outside agencies such as the model code organizations. The stakes are high in such decisions since the dollar volume of construction in big

TABLE 1
NUMBER OF INSPECTORS BY COMMUNITY POPULATION SIZE

Community Population Size (136 cities and counties)	Mean Number of Inspectors
250,000+	25.4
50,000 - 249,999	7.2
25,000 - 49,999	2.3
10,000 - 24,999	.5*
0 - 9,999	.3

* Many small communities have only part-time inspectors, so it is entirely possible to have a fraction of a person represented

cities far and away exceeds that of smaller communities. These groups have been able to justify their involvement in local code development for that reason and have been able to press their points home in the very special political milieu of the big city.

As many researchers have noted, the major American city is much more likely to have an "unreformed" political structure centered around a "strong-mayor" who is a party leader as well as a city administrator (Swanson and Swanson 1977). Associated with this framework and leadership style are a host of other structure and process elements--hotly contested partisan elections between strong political parties, ward constituencies, strongly entrenched political bureaucracies--which tend to mandate the cementing of coalitions in order to win elections. For that reason this type of system is likely to be politically sensitive to the expressed concerns of certain constituents, such as the local construction industry. This is particularly true when these constituents, normally fragmented and on all sides of any problem, speak clearly and in one voice on one issue. Such was the case when the model codes were (and are) raised as political and technical issues in many of the country's largest cities.

This also holds true when the introduction of model codes has been attempted in older and more industrialized parts of the nation, in the Northeast and North Central regions. Resistance here has been attributed to the lack of vitality of the construction industry. Thus, according to Field and Rivkin

> High and growing construction dollar volume means work to go around and little need to influence code rules that distribute economic activity. Steady or declining activity, on the other hand, probably fosters actions to preserve local jobs and sales. Thus, faster-growing Western and Southern regions make greater use of the model codes. (1975, p. 44)

The Future of Model Codes

Despite resistance in some constituencies, the model codes continue to make inroads against locally based codes. Two national surveys tracing code changes for 140 cities between 1964 and 1970 show a steady trend toward their adoption. During that period, 91 cities opted for one of the model codes and 31 swapped one model code for another (Field and Rivkin 1975).

This is probably the result of a number of factors.

First, from the standpoint of the large scale building-related manufacturing interests in the private sector, the adoption of model codes across wider geographic regions has a direct bearing on the ease and extent of their market penetration. They have, therefore, committed significant financial support to lobbying local communities on behalf of one or the other model codes.

Second, the model code organizations have become increasingly cooperative with one another. Although stopping short of consolidation they have undertaken several joint ventures designed to enhance the effectiveness and prestige of the model code movement in the United States. One such activity was the formation of the Council of American Building Officials (CABO) as an umbrella organization within which the model code organizations could link activities. Among other things, CABO produced the "One and Two Family Dwelling Unit Code," a current effort at nationwide coordination of building standards for such structures. These and similar efforts have gained the attention, if not the respect, of building officials and industry representatives around the country. Moreover, since many building officials now recognize that if their community adopts a model code they can hook into a national pool of technical expertise *without giving up their own authority over the code enforcement process*, they are much more favorably inclined toward such codes. In addition, as the plastic pipe controversy made clear, just because the community has adopted a model code does not mean that it cannot amend it for local purposes and intents.

Third, during the 1960's a growing chorus of resentment was heard at the national level about innovation and trade barriers erected by locally-drafted codes. Prestigious organizations such as the Advisory Commission on Intergovernmental Regulations and the National Commission on Urban Problems thoroughly repudiated their intents and effects. As the Douglas Commission pointed out in *Building the American City*:

> Building code jurisdictions are thousands of little kingdoms, each having its own way. What goes in one town won't go in another and for no good reason (1968, p. XI)

Fourth, over the past three decades, there has been growing pressure by the federal government on localities to standardize their codes and associated administrative processes. A major push in this area has come from the Department of Housing and Urban Development. For example, localities seeking federal assistance under the "workable program" requirements of the Housing Act of 1954 were virtually coerced by HUD into adopting a model code. Unless a community's workable program contained the most recent edition of the regional model code, HUD's policy was to reject the application. And, because many federal grants were contingent upon an approved workable program, some communities were much more motivated to quickly adopt a model code than they would have been in other circumstances. Although this pressure ceased with the adoption of the 1974 Housing and Community Development Act, it had a significant impact upon hundreds of communities over the 20-year life of the policy.

This overt involvement of the national government in an area of traditional local and private concern brings us to the last significant trend in our overview discussion of building regulation and codes. There is no question that federal intervention into building regulation has become a topic of considerable concern to both public and private construction-related groups.

The Increasing Federal Involvement in Building Regulation

Although local governments and the private model code organizations continue to dominate the development, promulgation, and enforcement of building codes in the United States, the role of the federal government in the regulation of new construction has grown considerably over the past two decades. Indeed, some observers who note the new national imperatives for energy-conscious design and construction see no end in sight to the federalization of building regulation

While federal involvement has been traditionally aimed more toward content rather than process intervention, in practice the two have become inextricably intertwined. Thus, while the federal impact has been more indirect than direct, it nevertheless has been substantial.

One example of this is provided by a recent National Institute of Building Sciences (NIBS) study of federal regulations (1979).[15] This work identified United States Code and Code of Federal Regulation (CFR) titles which were determined to have some effect upon five specific components of the building process and upon two general categories. The specific components consisted of: (1) Materials Acquisition/Production, (2) Land Development, (3) Building Design, (4) Construction, and (5) Sale and Operation. Breakdowns of each component into more precise activities were also provided.

While all of the above are germane to new construction and are affected by federal regulations in one way or the other, we are particularly concerned here with Land Development, Building Design, and Construction since these are the parts of the process which have been traditionally regulated by local government.

The NIBS study uncovered 181 U.S. Code sections (73 for Land Development, 65 for Building Design, and 43 for construction), and 190 CFR titles (83 for Land Development, 63 for Building Design and 44 for Construction) which were noted as having an impact upon these three building process components (1979, pp. 3.7 - 3.10). While the study noted that there was no attempt made to determine the extent of the impact each statute had on component activities, it emphasized that problems inherent in coordinating such a mass of laws produced a significant total effect at the local level.

More specific federal regulatory impacts at the local level are evidenced by the activities of several federal agencies. Notable among these are the Department of Housing and Urban Development (HUD), the Veteran's Administration (VA), General Services Administration (GSA), Farmer's Home Administration (FmHA), and the Department of Defense (DOD).

For example, HUD's Minimum Property standards (MPS) require individuals seeking FHA mortage insurance to comply with specific rules governing new construction and rehabilitated dwelling units. In practice this means that many builders must meet both HUD, MPS requirements, and the provisions of the local building code. This is irksome to builders, demeaning to building officials, and costly to the public. Why? Because the technical provisions of the MPS and local codes, particularly if based on a model code, are generally the same. Nevertheless, the builder has to conform to the administrative requirements of both systems. And, local building officials are not normally allowed to perform FHA inspections, even though the codes may be identical. This is humiliating since, as one building official stated, "it is further evidence of the federal government's lack of confidence in our abilities." * Finally, it is clear that duplicate inspections and paperwork ultimately add to the cost of home buying.

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* Personal communication, February, 1978, with City of Tampa building inspector.

The other agencies noted above use their own versions of the MPS. This often entails problems similar to those noted for HUD For instance, the Veteran's Administration also requires a separate inspection of homes it insures.

Besides inspection requirements for the entire dwelling, federal intervention into the building regulatory field has also grown relative to component parts of the house and associated construction processes. This has resulted, in large part, from increased national awareness of environmental, consumer protection, and energy issues.

Thus, the Federal Trade Commission (FTC), the Consumer Product Safety Commission (CPSC), the Occupational Safety and Health Administration (OSHA), and the Department of Energy (DOE) have all had a hand in producing codes and standards which govern a wide variety of housing systems and building activities The FTC regulates product labeling, the CPSC provides glazing standards for windows, and OSHA promulgates and enforces construction site safety requirements

Of major importance are the recently proposed Building Energy Performance Standards (BEPS), which are a joint product of DOE and HUD Scheduled for implementation sometime in August, 1981, BEPS will impact the design and construction of all new building in the United States

The BEPs rules, recently published in the Federal Register, will affect everyone concerned with buildings and their use, i e owners, builders, designers, engineers, code officials, building product manufacturers, suppliers, and the financial industry.[17] Developed in response to a mandate from Congress contained in the

Energy Conservation Standards for New Buildings Act of 1976.[18] BEPS is expected to result in energy savings in single family residences of 22 to 51 percent over those designed and built to current practices. An initial analysis by DOE suggests that this saving considerably exceeds that achievable through the application of HUD's Minimum Property Standards.

Many states have anticipated BEPS by promulgating their own energy codes for new construction. Florida is one of these. The intent is to provide a set of regulations which contain standards equivalent to the federal rules, but which are geared to the state's unique climatic conditions. The Florida Model Energy Code is an attempt at this, even though architects and builders from various sections of the state, particularly South Florida, have denounced it as having a repressive impact on building design while not solving the energy crunch in new construction.

What is particularly salient, however, about both the Florida Energy Code and BEPS, is that effective implementation depends primarily upon enforcement by local government plans examiners and building inspectors. As we shall discuss further in Chapter VI, these individuals are often under-qualified and overburdened as it is. Adding yet another regulatory task (without increasing agency funding or personnel skills), particularly one which may require relatively complex calculations such as those necessary to determine whether or not a design meets energy-saving criteria, is likely to further complicate the technical and political problems inherent in the role of these local agencies and their staffs.

To sum up, federal intervention into the regulation of new construction continues to grow despite opposition from localities, which fear the nationalization of building controls, and the opposition of local trade and manufacturing groups, which seek to maintain exclusive rights to local markets built around restrictive codes. If these barriers are to fall, it seems logical that they will do so in reaction to the national energy crisis. Indeed, the movement toward federal involvement here parallels past events in American history and government.

Federal interventions in labor issues in the 1930's, in civil rights in the 1950's, and in the environment in the 1970's were preceded by a public and political recognition that these were issues of "critical national interest." Energy is undoubtedly as significant an issue as any of these. Its relevance to the regulation of construction is amplified by the current estimate that over one-third of all energy produced in the United States is consumed in the building and maintenance of our public and private structures.[19] In view of this, there is no question that the federal regulatory role will continue to expand into areas of traditional local concern.

Summary

In this Chapter, we have traced the legal and political evolution of building regulation and codes in the United States. In so doing, we have touched upon significant factors associated with the increasing sophistication of building controls. Moreover, relative to the experience of the United States, we have emphasized the persistence of localism relative to code development, promulgation, and enforcement. This is tempered, however, by the growing reliance upon regionally based model codes and by the incursion of the federal government into areas of historically local domination. In the next Chapter, we focus upon the modern permitting process, as carried out by the typical local permitting agency. We follow the progression of building regulatory decisions through the phases of permitting and describe the interplay of public and private participants within the regulatory process.

Notes

1 See Donald G. Hagman. 1971. Urban Planning and Land Development Control Law. St. Paul, Minn.: West Publishing Company. Chapter 11, "Building and Housing Codes" is particularly relevant.

2 As Field and Ventre (1971) point out:

> In the United States building regulation has always been a local function. States, from the beginning, delegated to the cities their authority over building regulations and the pattern of local control thus was set (p. 138).

See Field and Ventre. 1971. "Local Regulation of Building."

3 See Economic Commission for Europe. 1974. Building Regulations in ECE Countries. New York: United Nations, pp. 38-51.

4 Ibid., p. 11. For a synopsis of general building system types for groups of nations, see also, Evelyn Cibula. November, 1970. 'Systems of Building Control.' Build International. pp. 336-338.

5 This survey forms the data base for Field and Rivkin's ground-breaking study of U.S. building regulations. See Charles G. Field and Steven R. Rivkin. 1975. The Building Code Burden. Lexington, Mass.: D.C. Heath. All further references to this work appear in the text.

6 Others include resistance to the use of wood roof trusses placed 24" rather than 12" on center (less wood and work involved), introduction of wood underfloor plenum systems (replacing concrete slab foundations--mightly opposed by the Portland Cement Association) and the use of non-metallic sheathed electrical cable (plastic substituting for copper or aluminum). The plenum controversy is particularly germane to Florida.

7. The general building code enabling legislation for Florida counties and cities is reproduced below

> Section 163.295 Florida Statutes, Building, plumbing, electrical, gas, fire, safety, and sanitary codes.
>
> The several counties and incorporated municipalities, individually or in combination as authorized by this part, are authorized and empowered to adopt and, from time to time, amend or revise and enforce building, plumbing, electrical, gas, fire, safety, and sanitary codes after a public hearing with due public notice. Such codes are declared to be necessary to promote and preserve the public health, safety, comfort, order, appearance, convenience, morals, and general welfare. Such codes are declared to be one of the several instruments for implementing such comprehensive plans or parts thereof as may have been or hereafter may be adopted. Such codes may be adopted by reference if at least three copies of each such code are kept available for public use, inspection, and examination at some public office under the jurisdiction of the governing body to be determined by the governing body at the time of the adoption of such code or codes The penalty provisions for the violation of such codes shall be set out in full in the ordinance adopting the code or codes. The provisions of this section shall not be interpreted to authorize the adoption and enforcement of any minimum housing code or public school building codes

West's Florida Statutes Annotated 1972 Vol 5, County Organization and Intergovernmental Relations St Paul, Minn.: West Publishing Co

8. The exceptions are notable. Among them are Williamsburg, Virginia, planned in 1699, Philadelphia, Pennsylvania (1682), Savannah, Georgia (1733), Annapolis, Maryland (1695), and Washington, D.C. (1791). See William I Goodman and Eric C Freund, eds 1968 Principles and Practice of Urban Planning. Washington, D.C.: International City Management Association, pp 7-14

9. For a synopsis of Chicago School as well as other early theoretical viewpoints of urban life, see Richard Sennett, ed. 1969. Classic Essays on the Culture of Cities. New York: Meredith Corporation.

10. A divided Supreme Court first sustained a general zoning ordinance as a valid "police protection" in the landmark case Village of Euclid v. Ambler Realty Co. 272 U.S. 365 (1926).

11. The Tenement House Act became elaborated through four enactments between 1867 and 1900. Its first major test came in 1869, when the court upheld an ordinance requiring a water supply on each floor of a tenement house. Health Department v. Rector of Trinity Church. 145, N.Y. 32, 39 N.E. 833 (1895). A rather recent and very well known attack upon a municipal housing code was Safer v. City of Jacksonville. 237 So. 2d. 9 (1st D.C.A. FLA. 1970).

12. 78 Stat. 785. 1964, 42 U.S.C.A. Section 1451 (c). The federal government's role in attempting to stimulate more vigorous housing code enforcement is described in S. Leigh Curry, Jr. Fall. 1971. "The Federal Role in Housing Code Enforcement." The Urban Lawyer 3: 367-73.

13. This particular problem was emphasized at a recent hearing before the Senate Committee on Banking, Housing, and Urban Affairs. See, U.S. Congress, Senate. Committee on Banking, Housing, and Urban Affairs, Impact of Building Codes on Housing Rehabilitation, 95th Congress, 2nd sess., March 24, 1978.

14. It should be noted that these figures are very close to those reported in a 1964 IMCA investigation. In that study of 1,130 cities and towns across the nation, the median number of inspectors working in building inspection departments in cities over 100,000 population was 29. For cities between 50,000 to 100,000, the number was eight, and for cities of 10,000 to 5,000, the median number of inspections was three. See "Municipal Building Inspection Practices." 1964. 1964 Municipal Year Book. Washington, D.C.: ICMA, pp. 333-358.

15. Heinz Eulau notes that

> The city, in contrast to the open country, is characterized by a greater range of individual variations, a more pervasive segmentation of human relationships making for membership in widely divergent groups as well as for divided allegiances, a more complicated class structure and heightened social and physical mobility, a greater division of labor and more intense economic rivalry, a wider range of ideas and more secular attitudes,

Heinz Eulau. 1969. Micro-Macro Political Analysis. New York: Aldine, p. 250.

16 This study, performed for the National Institute of Building Sciences by Peat, Marwick, Mitchell and Company, is one of several investigations being initiated by NIBS into the process and content of building regulation. Unfortunately, most of these primarily focus upon the role of federal regulatory agencies. See Peat, Marwick, Mitchell and Company. 1979. "A Study of the Regulations and Codes Impacting the Building Industry." Photocopied. Washington, D.C.: NIBS. All further references to this work are in the text.

17. See U.S., Department of Energy. November 28, 1979. *Energy Performance Standards for New Buildings, Proposed Rule,* Federal Register, Vol. 44, No. 230.

18 42 U.S.C. 6831-6840.

19 While the precise percentage is subject to debate, the one-third estimate is generally agreed upon and cited in many government and professional publications. See, for example, "Energy Performance Standards for New Buildings--BEPS." December, 1977. Photocopied. Washington, D.C.: National Institute of Building Sciences.

CHAPTER IV

THE PERMITTING PROCESS: IMPLEMENTING THE BUILDING CODE

Introduction

In this Chapter we describe the local government permitting process as it is typically carried out by city and county building regulatory agencies. To do this, we break the process into its four constituent, sequential phases--application, plan review, construction inspection, and final inspection. Then we describe the public and private interactions which take place within each phase. We also describe some of the agency processes, structures, and procedures which research has shown to have a bearing upon interactional quality.

Prior to doing this, however, we place the local construction regulatory process in its overall context within the flow of building-related decisions. These begin with public and private actions at the national level.

The Regulatory Flow

The regulation of new construction can be viewed as a flow of decisions moving from the standard-setting process at the national level to the enforcement decisions of the street level bureaucracy--the local building inspection department. As Figure 4 illustrates,

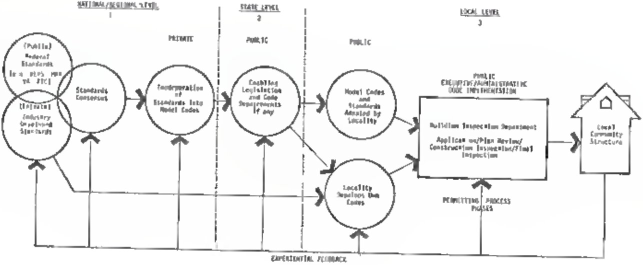
NATIONAL/REGIONAL LEVEL
1
STATE LEVEL
2
LOCAL LEVEL
3
PRIVATE
PUBLIC
PUBLIC
(Public) Federal Standards (e.g. HEW, HUD or FTC)
(Private) Industry Developed Standards
Standards Consensus
Incorporation of Standards Into Model Codes
Enabling Legislation and Code Requirements if any
Model Codes and Standards Adopted by Locality
Locality Develops Own Codes
PUBLIC EXECUTIVE/ADMINISTRATIVE CODE IMPLEMENTATION
Building Inspection Department
Application/Plan Review/ Construction Inspection/Final Inspection
PERMITTING PROCESS PHASES
Local Community Structure
EXPERIENTIAL FEEDBACK

FIGURE 4
OVERVIEW FLOW OF NEW CONSTRUCTION REGULATORY PROCESS

the flow does not end there. When local codes are implemented they generate "experiential" feedback which may find its way back, ultimately, into the "leverage points" or decision nodes along the route (Gergen 1968, p. 182). These nodes may be conceptualized as conversion processes along the decisional flow route. Construction regulation can therefore be considered a system even though national, state, and local conversion processes have been criticized for sluggish response to the signals pumped into feedback channels. To provide an overview of the regulatory flow, we will briefly discuss the major nodes along the decision path, ending with a more elaborate discussion of the local permitting process.

1. National/Regional Standard Setting

Building codes rest, ultimately, upon standards determined by private industry and the federal government. Thus, while codes specify the internal arrangement of buildings, their structural components, and the performance of building materials, standards spell out agreed upon chemical or physical properties that all the preceding contain. For example, a typical building code will require that wooden studs be placed a specified distance apart in certain load-bearing walls. The associated standard will specify the physical characteristics of the 2 X 4, utility grade lumber to be used.

While they are in practice highly interrelated, codes and standards are developed by different organizational and decision-making bodies. However, both codes and standards share several features: there is a heavy reliance upon the participation of voluntary private organizations in the development of both, and over the past decade, the role of the federal government has significantly increased in each. Moreover, standards, like codes, can be the focal points of highly competitive industries vying to achieve economic hegemony over a particular market sector.

The market has developed an extremely intricate "consensus process," however, which provides a mechanism to reduce, or at least institutionalize, rivalry between proponents of competing standards. This is necessary given the 400 to 500 national trade and product associations which propose thousands of standards covering all aspects of housing construction (Peat, Marwick, Mitchell and Co. 1979). In recent years these private firms have been joined by a growing number of federal agencies which have contributed their own sets of standards.

Product standards are usually developed by the individual associations through their own research and testing branches. Once developed, they are submitted to one of the national standardization associations, such as the American National Standards Institute (ANSI), for certification. Certification may be granted following a lengthy process whereby special committees representing the manufacturing associations meet with public interest groups to consider the standards' general acceptability. Reaching consensus can be extremely difficult since manufacturers will naturally seek to have certified those standards which come closest to the specifications of their own patented products or processes. Thus, "consensus" can be a highly political as well as a technical procedure. One upshot of this is that technical innovations are relatively difficult to introduce, especially if the manufacturer is new to the game. Field and Rivkin report:

> To receive favorable treatment when seeking the adoption of new standards, one generally has to be part of the team. The standards associations are often considered by some to be closed shops. To have influence, you must be part of the established industry. Thus, an innovator who generally stands outside the system encounters great difficulty in securing acceptable standards for his product if such standards do not currently exist. (1975, p. 39)

Relative to technical innovations, therefore, the construction industry tends to be extremely conservative. This orientation, manifested in other "gatekeeping" functions, pervades both public and private building-related activities in virtually all phases of endeavors.

Standards researched by industry and legitimized through consensus at the national level, pass to local code agencies in one of two ways. They may either be incorporated into one of the model regional building codes, which are then adopted as a whole by the community, or they may be lobbied piecemeal directly into the local code.

2. State Enabling Legislation

Whichever way standards become part of local building regulations, they must, like the model codes themselves, permeate the legal membrane of state enabling legislation. Although, as noted in Chapter III, most states make this a very easy process by granting autonomy to local communities relative to their decisions to adopt particular codes and associated standards, there has been a strong trend for states to require localities to adopt some form of minimum building code. This movement has been hastened, over the last decade, by two principal factors--increased consumer rights awareness and a growing concern for the environment. The latter factor has been translated into expanded controls on building and development activities at all levels of government and is particularly related to state intervention into local building regulatory processes even though impacts have often been rather indirect.

For example, in growth states, such as Florida, Arizona, California, and Hawaii, where environmental issues succeeded in capturing prolonged public attention, the local building code was viewed by some state legislators and bureaucrats as one means of "getting a handle" on growth management. However, efforts to produce uniform codes which were responsive to statewide environmental issues were doomed to defeat at the hands of powerful economic and political interests opposed to the loss of local code control. Thus, in Florida, forward-thinking state lawmakers were far more successful in getting broad-based environmental and growth management legislation passed, such as the Florida Water Resources Act of 1972 (Chapter 272, *Florida Statutes*) and the Local Government Comprehensive Planning Act of 1975 (Chapter 163, Florida *Statutes*) than they were at initiating reforms which would have snatched building codes or permitting practices from local hands. As a consequence, codes and permitting practices were affected indirectly rather than directly by state actions.

For example, following the passage of the Water Resources Act, localities were required, in conjunction with the appropriate local water management district, to review permit applications for large scale water users who preferred to drill wells rather than hook up to existing water lines. While one result of this was better administrative control over a critical natural resource, local builders and developers perceived only added bureaucracy and increased delays in the permitting process since another government agency was required to check-off permit applications. Consequently, although the state was able to influence building regulation, a spin-off was increased tensions between the local regulators and the regulatees, especially when the building market became depressed. In those times particularly, the construction industry directed its anger not at the state or regional agencies which produced overlay regulations, but rather at the highly visible, local construction regulatory system which enforced the state's will.

It is no wonder, then, that the local building regulatory agency has become the focus of so much attention by builders, developers, trade associations and professionals. The irony is, however, that the local code and associated permitting practices are less a product of the locality, but rather are becoming an amalgam of national private and federal standards, model code association components and state requirements. This is so even though localities can and do amend the local code to fit local purposes and interests. Cities and counties must observe overriding federal and state laws, and are also forced, because of the costs involved, to accept many product and process standards developed by private industry. Thus, as Figure 4 illustrates, while the local permitting agency is the last sequential link in the new construction regulatory process, it is, in reality, the first substentive step. It is here that the federal and state legal and political powers are concentrated in order to mold the physical shape and structure of the community. Consequently, local agencies often must bear the full brunt of citizen discontent against many regulatory strictures imposed from above.

In response, some building regulatory agencies have developed or adopted innovative processes or agency features which tend to facilitate what has been viewed by many citizens as an increasingly traumatic journey through local permitting processes. We turn now to a discussion of that journey.

3. Local Level Regulation: The Permitting Process

In principal, the permitting process seems clear and simple. As our field research reveals, on the surface it is a linear movement of development applications across agency review and inspection phases which culminates in a completed structure conforming to all pertinent health and safety regulations. Each phase is sequential and designed to coordinate, in theory at least, the legal requirements of new construction with the building process itself. While jurisdictions vary relative to the interjection of specific reviews and check-offs within the phases (e.g. zoning conformance may be required prior to water and sewer hook-up approvals), the overall sequence of these phases is virtually universal in the United States.

For most construction, permitting is normally broken down into four phases. These are: (1) the application phase, (2) the plan check (or review) phase, (3) the construction inspection phase, and (4) the final inspection phase. Within each phase numerous small decisions are made by local government appointed officials. Figure 5, a flow chart derived from a study of the permitting activity in the City of Tampa, Florida, illustrates the typical sequence of the process. It is triggered by a citizen submitting applications to local utility departments and to the building bureau and ends up with the issuance of a certification of occupancy ('CO') attesting to the structural soundness of the building.

The apparent simplicity of permitting belies its extraordinary complexity. Even the most basic one or two-family residential construction may trigger decision-making by a wide array of local government bureaucracies. More involved projects such as multi-family, commercial, or industrial building can involve the direct interplay of countywide, regional, state, and federal agencies. Indeed, most construction entails hundred of decisions and bureaucratic actions which must flow through and be coordinated at the local level by local officials. Some of these actions are, by law, non-discretionary while others involve a substantial amount of discretion on the part of local building officials and inspectors.

Whether discretionary or not, both the process and substance of permitting decision-making are important to builders, developers, 'do-it-yourselfers' and the other participants in the permitting process. As Braybrooke and Lindblom (1963), March and Simon (1959), Thompson (1973) Sayre (1970) and other public administration theorists have long pointed out, process and content tend to be inextricably bound-up together.[1] This is particularly germane to the development industry vis-a-vis its regulators. For example, a delayed affirmative

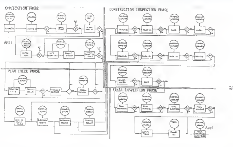
APPLICATION PHASE
ADDRESS
App1
PLAN CHECK PHASE
STRUCTURE CHECK
CONSTRUCTION INSPECTION PHASE
ROOF
FINAL INSPECTION PHASE
FINAL ELECTRICAL
FINAL BUILDING
TREES
App1

FIGURE 5
PHASES OF THE INSPECTIONAL PROCESS (APPLIES SPECIFICALLY TO SINGLE-FAMILY RESIDENTIAL CONSTRUCTION)

decision on a permit application by a regulatory agency can be equivalent to a denial. Indeed, based upon reports by builders, it may be a much more painful and costly turn-down than if the agency rejects the application at the outset. When such results are routine in a community, or when they seem to apply to certain builders and not to others, one must question whether or not the permitting process is a neutral, bureaucratic instrument of the locality, or whether it is a significant policy-making tool to limit, redirect, or redistribute, legitimately or otherwise, the benefits and costs of community development. Indeed, many of the participants in the permitting process have posed just that question.

Permitting process participants

There are usually many different public and private institutional and individual participants in the permitting process. As Figure 6 illustrates, one may conceive of the participants as dichotomous groupings, each clustered about a central, organizing node. For the public sector, the node is the building inspection department, for the private sector, it is the project to be developed.

Private sector participants. Typical private sector permitting participants are property owners, lending institutions, architects, engineers, general contractors, and sub-contractors. Following Stinchcombe's (1959, p. 175) classic description of the "craft form of administration," these actors come together in a synthetic organization in order to perform a specific task, e.g. the construction of a building. Completing this, they disperse

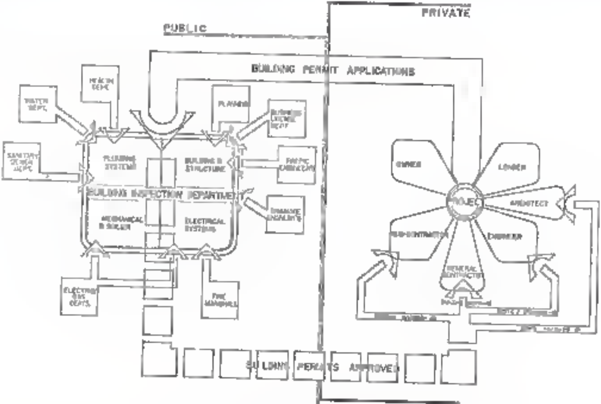
PUBLIC
PRIVATE
BUILDING PERMIT APPLICATIONS
HEALTH DEPT.
WATER DEPT.
SANITARY SEWER DEPT.
PLANNING
BUILDING LICENSE DEPT.
TRAFFIC ENGINEERING
DRAINAGE ENGINEERING
PLUMBING SYSTEMS
BUILDING & STRUCTURE
BUILDING INSPECTION DEPARTMENT
MECHANICAL & BOILER
ELECTRICAL SYSTEMS
ELECTRIC GAS DEPTS.
FIRE MARSHALL
OWNER
LENDER
PROJECT
ARCHITECT
SUB-CONTRACTOR
ENGINEER
GENERAL CONTRACTOR
BUILDING PERMITS APPROVED

FIGURE 6
PUBLIC AND PRIVATE PERMITTING PARTICIPANTS

This description glosses over, however, the deep-seated divisions that beset the private participants as they set about their task. As Gauchat and Schodek note:

> A typical building venture, for example, is not usually an exercise in altruism, i.e. producing the highest quality product for the most reasonable cost. On the contrary, the interests of most participants in a typical project are widely divergent (Gauchat and Schodek 1977, p. 19)

For example, property owners generally want high quality products for the least cost (e.g. "the most for least"). The professionals--architects and engineers--have the responsibility of looking after the owner's interests and are also concerned about products of high quality. Their fees, however, are usually tied to the total cost of the project (e.g., 'the most for most') so that there is little incentive to hold down project costs. Contractors and subcontractors generally have little incentive to create high quality products. Their concern, note Gauchat and Schodek, is generally "to do the minimum amount of work for the greatest amount of money without violating contractual objectives" (1977, p. 20). Consequently, they seek to do "the least for the most."

And, overriding all these relationships is the role of the lending institution. Typically, it is concerned only with a timely return on its investment. In practice this seemingly neutral interest helps create an atmosphere of extraordinary tension, because every delay results in an economic loss to one or the other of the above participants.

The net result of these cross-cutting interests is continuing, albeit mostly petty, conflict over the progress of construction. For the local regulatory agency, this is a mixed blessing. On one hand, the chronic internecine warfare tends to divert attention from the problems of regulation. On the other hand, the relatively high level of tension tends to contribute to the uncertainty which pervades the agency's general task environment. As a consequence, building regulatory personnel tend to develop particular orientations to their jobs, and this has a direct bearing upon their propensity to seek out and implement technical or procedural innovations.

Public sector participants. While construction permitting begins and ends with the building inspection department by virtue of the fact that permit applications are obtained there and final certificates of occupancy are issued from this agency, a host of other public regulatory organizations may take part in the permitting process. Investigation of the City of Tampa's local regulatory building environment revealed that, besides the building inspection department, no less than 16 other city and county agencies might be required to participate in the approval of even modest scale, construction.[2] Moreover, if the project entailed any relatively unusual impacts, or special uses, regional and state agencies also might be required to enter the picture.

For example, a property owner wishing to construct a small restaurant which included a paved parking area more than one-quarter acre in size, and bounding a state-maintained right-of-way, might typically be required to obtain permit approvals from regional and state Department of Transportation offices, from the State Hotel and Restaurant Commission, and, possibly, from the regional water management agency as well. Such additional reviews, routed through the local building department, can add months to the overall permitting process.

For most residential construction, however, including small-scale multi-family projects, our cross-national research reveals that the following types of local agencies are most likely to be required to participate in the permitting process by approving or reviewing construction plans, or by taking some role in field inspections.

Agency	General Role
* Planning Department	Approves zoning
* Business License Department	Approves occupational license (for rental property or business)
* Traffic Engineering Department	Approves curb cuts, any temporary or permanent traffic circulation changes
* Drainage Engineering Department	Approves paving plans where run-off may cause additional flows in city sewers
* Fire Marshall	Approves construction plans generally for fire safety conformance
* Electric/Gas Departments	(where publically owned) Approves availability of hook-ups for utilities
* Sanitary Sewer Department	Approves hook-up to local sewer system
* Water Department	Approves hook-up to local water system
* Health Department	Approves septic tank placement (if allowed in jurisdiction), well drilling, and certain plumbing systems.

Figure 6 illustrates the typical interaction points for each of the preceding agencies with the four major component divisions (or bureaus) of the local building inspection department. This department is generally charged with coordinating the flow of permit applications to and from the external departments just noted, and with other state or federal agencies which may be involved. Thus, as Figure 6 depicts, completed permits allowing the private sector to begin construction generally issue from the building inspection department.

Building inspection department personnel. Since this agency is central to the permitting process, we will briefly discuss some of the functions and role characteristics associated with its top personnel. Field and Rivkin note the importance of such a review in this context:

> The building official, as the chief enforcement official, breathes life into the written code. Whereas the code specifies what type of construction is permissible, the official insures that the standards are met. Often, he must interpret the standards when applied to specific building plans. Occasionally, he must determine whether a uniquely designed building meets the code's performance standards; if so, he will grant approval. Almost every code confers this special approval power. The willingness of the local building official to use this power to entertain new products and techniques depends upon the attitudes and personal background he brings to the job (1975, p. 47).

As the head of his department, the typical local building official is charged with approving building plans, inspecting building construction, and issuing certificates of occupancy. Naturally, in larger communities these duties are delegated to plans examiners, field building inspectors, and permit clerks, although the chief may assign himself to some phases of the bigger, more complex construction projects.

Although in the last few years building staffs in some communities have made great strides toward professionalization, many continue to be stigmatized and characterized by low pay and prestige, parochial orientations, extreme sensitivity to political influences, and a stolid conservatism which resists both technical and procedural innovation.[3] Indeed, the traditional picture of the local building official and his staff suggests a likeness to certain components of Thompson's description of the "desk class" bureaucracy. The "desk classes" are characterized by

- Work components determined by the organization rather than extensive pre-entry preparation
- Declining inter-organizational mobility as time passes
- Dependence upon the organization for status and function
- Dependence upon extrinsic organizational rewards
- Attitudes of chronic dissatisfaction
- Acquisition of thoroughly conservative attitudes regarding programs and procedures (Thompson 1969, p. 20).

Thus the chief building official tends to internalize the disincentives that his position entails. A major consequence of this is for him to "resist practices with which he is unfamiliar, since almost all incentives favor the traditional or local way of building, and none favor the innovative" (Field and Rivkin 1975, p. 56). One would suspect, therefore, that it would take significant pressures or events, to force changes in established permitting procedures or processes. This is particularly true since many local competing development interests have a stake in preserving the technical and procedural status quo. Innovations have the potential of disrupting whatever economic equilibrium prevails at the moment in the local development situation. Thus, technical or procedural change can redistribute costs and benefits among private industry participants.

One way of discussing some of these innovations, the dependent variables in this research, is to examine them in the context of the four phases of the permitting process itself. In this way we get a picture of their relationship to the decision-making flow discussed at the outset of this chapter.

The Phases of Permitting

Application phase

The construction permit process is, typically, citizen initiated, although there are circumstances where regulatory officials will start the sequence (e.g. where an inspector comes across a structure being built without benefit of permit, a relatively common situation). During the application phase, the first step in building permitting, many of the private sector participants have been assembled at the owner's initiative into the synthetic organization necessary to complete the project. By this point, preliminary concept plans have already been drawn by the architect (if one is involved) and the owner has identified the general contractor, who will undertake the job of hiring sub-contractors. In most cases, the architect or the general contractor is charged with the responsibility of collecting and completing the necessary permit application forms for the structural, mechanical, electrical, plumbing/gas, and water/sewer approvals needed before construction can commence. If the architect or general contractor is a local operator, he likely will have the applications already in his possession. Moreover, if he is locally based, it is likely he will understand the specific requirements associated with each form. This can be particularly important since, in some communities, each department or bureau may have completely separate application forms for each building system. To complicate this, these may be badly outdated relative to new ordinances or there may be no explanatory materials--pamphlets or brochures--which specify how one is to complete each application. The result is that "outsiders" tend to be at a distinct disadvantage insomuch as they must rely upon personal communication with building inspectors or permit clerks who neither know nor trust them.

Some communities, such as Kansas City and St. Louis County, Missouri, Alexandria, Virginia, and Cincinnati, Ohio,[4] have implemented "application form reform" by doing away with separate paperwork for each regulatory bureau, and have combined permit applications for relatively simple projects--one and two family residential construction--into a single, unified form. These permits, along with alteration and addition requests (e.g. adding-on a new room to an existing structure) constitute the bulk of the paperwork for most building regulatory agencies. Consequently, any streamlining here has an impact on the agency's ability to expeditiously handle other, more complicated, projects. Such reform is a significant change for many bureaus within the regulatory bureaucracy because power and autonomy are directly linked to the promulgation and control of permitting paperwork. Once that is centralized within the building department, bureau chiefs lose a measure of influence.

For large, complex construction, application forms can prove disasterous because of up-front time delays. The problem is exacerbated by the fact that complex projects typically require far more agency approvals than do smaller ones. Local agencies in some jurisdictions have tried to overcome this problem by hiring or designating project and/or customer service coordinators, who act as formal liaisons between private and public participants beginning at the application phase. Another associated technique is the use of the development review committee, made up of representatives from all the community's regulatory agencies. The committee's function is to help iron out knotty application and related problems before they get out of hand. Dade County, Florida, and St. Louis County, Missouri, along with other communities, have instituted these innovations.

As an alternative to the above, officially established, procedures, contractors or architects may attempt to hire local 'consultants' who know the idiosyncracies of the local permitting system, including its application processes. Such contacts open up the potential for a wide range of corrupt activities within building regulatory agencies.

For example, Gardiner and Lyman documented the activities of New York City's unofficial "expediters,' who assisted architects and contractors through the application and plan review phases of permitting

> Capitalizing on the fragmentation, complexity, obstructiveness, and corruptibility of the approval process, the expediters served as middlemen for architects and builders seeking permits. 'For a fee, an expediter will file an application for a building permit, oversee its progress through the building department, and guarantee its final approval. . .'(1978, p. 106).

In the City of Tampa one well-known "expediter" was a former head of the city's plumbing bureau. He specialized in "consulting," or running interference for those unfamiliar with the extraordinarily cumbersome permit procedures which the regulatory bureaucracy maintained for years

Besides unified application forms, use of a development review committee and clear and concise citizen informational materials (an out-growth of regularly reviewed permitting procedures) other features which tend to assist citizens through the permitting application phase are the use of cross-trained permit clerks and computerized permit record keeping

Because many of the traditional building regulatory agencies have mirrored the fragmented industry they regulate, they have evolved an equally specialized organizational approach to permitting. A consequence of this has been, in larger agencies, a collection of permit clerks who concentrate upon processing the applications for a particular building system--e g plumbing--and who are not trained to do anything else. Because a building is, ultimately, an integrated system, and since the processing of one part of an application is often contingent upon another before the plan review phase can begin, it is extremely inefficient to split clerking responsibilities. An innovation in agency practices has been to cross-train clerks so that any could perform the other's functions. In that way, personnel can easily pinch hit for each other during vacation time, sickness or other contingencies. However, like the centralization of applications, this change involves some loss of power to bureau chiefs since they no longer have exclusive control over any one permit clerk.

If nothing else, the application phase entails the communication of a significant amount of data relative to the intended structure and site to be developed by the applicant. Data categories typically cover a wide range of areas including information about the applicant, contractor and sub-contractor licenses, property ownership, zoning, type of construction, mechanical systems, electrical components, plumbing, value of proposed work, fire prevention, and, in a growing number of jurisdictions, tree and landscaping information. Computerizing this information during the application phase provides quick data access for both the customer and the agency as the permitting process continues through plan review and inspectional phases. This tends to be very important in communities undergoing rapid growth as they struggle to cope with antiquated municipal recordkeeping systems. Moreover, computerized permit data allow communities to easily extract and aggregate site development records for the use of planners and policy makers as comprehensive plans are being formulated. The City of San Diego, California, was one of the early proponents of this concept. Indeed, their use of building permit data as one of the bases of a comprehensive urban information system, has served as a model for other communities across the country.[5] It should be noted, however, that many communities simply cannot afford to implement computerized permit recordkeeping.

Plan Review Phase

While the activity in the application phase is dominated largely by citizens' efforts to secure application forms and provide the correct data, the plan review (or check) phase is comprised mostly of the activities of public regulatory personnel who examine the completed applications to assure that all pertinent codes, rules, and regulations have been observed. In particular, this means that working drawings, which lay out the nitty-gritty details of construction, be certified for compliance with local building codes and development regulations. Because plans must depict construction which conforms to the zoning law for the applicable neighborhood, this phase may entail the appeal of local zoning ordinances to boards of adjustment, or to the city or county commission. At the successful conclusion of the plan review phase the applicant is issued all permits to begin construction.

Depending upon the size and complexity of the project, this phase may constitute anywhere from a one-week to a six-month wait for the applicant. In the City of Tampa, plan reviews for the typical single-family residential structure take, on the average, about one to three weeks to complete.

Since the plan review phase can take a long time, some building regulatory agencies have instituted the practice of holding open sessions with developers and architects prior to the formal submission of final plans. This preliminary review meeting, conducted usually for complex projects and often in coordination with development review committee meetings, serves to alert the myriad public and private building participants to real and potential problems relative to changing local code requirements, agency operational practices or, even, local labor and materials availability. Thus, private building participants new to the jurisdiction are given the opportunity to familiarize themselves with some of the local regulatory nuances before they officially initiate action through the submittal of plans. At that point--after a great deal of work and expense has gone into the architectural and engineering preparations--battle lines tend to be relatively rigid and negotiations between the parties far more tense. Moreover, the preliminary plan review meeting gives the participants the opportunity to get to know each other, and this may be crucial during later bargaining sessions.

With the exception of preliminary plan review meetings, plan review (in communities that use it) is almost totally an internal agency process. Because of this and because zoning problems arise during this phase, the plan review process is most vulnerable to political pressures. For example, in a survey of all building department personnel in the City of Tampa's Department of Housing, Inspection and Community Services, 33 percent (11 out of 33) of the respondents reported that they had been subjected to significant and frequent political pressure in their day-to-day permitting jobs.[6] When employees were sorted by job categories, more than 80 percent of those claiming political interference (e.g., "suggestions" from the Mayor's office that certain zoning violations be overlooked, "requests" for favorable treatment for a particular architect who had supported a city council member, etc.) were people involved in some part of the plan review process.

One means of better insulating the permitting process from illegitimate political pressure which may favor some citizens over others, is to remove some or all plan review functions from the permitting agency. Another, less radical, but nevertheless innovative approach, is to professionalize existing personnel through in-service training and educational requirements.

In the first case--removal of the plan review function--the typical procedure is for the building inspection department to be authorized to contract out plan review steps to an independent, private engineering or architectural firm. This is the way the City of San Diego handles its reviews when it reaches a permit overload situation. However, other small communities contract out plan review functions on a regular basis. It tends to be cheaper than having full-time staff on the city or county payroll, and the results are more professional than the standard procedure of many inspectional agencies--allowing building inspectors to perform plan reviews. Despite attempts to professionalize them, most inspectors are not licensed engineers or architects and do not, therefore, bring to their jobs the special training and external loyalties which would help buffer them from political pressures. Moreover, they are simply less qualified, in general, than architects or structural engineers, to perform plan examinations.

In the absence of external, professional plan reviews, other building agencies have sought to increase the capabilities, competence, and the independence of reviewing inspectors by requiring them to take in-service training courses. For example, Los Angeles, California, St. Louis County, Missouri, and Fairfax County, Virginia, have instituted arrangements with local community colleges to provide the instructional setting and curricula for inspectional and plan review academic work. In fact, the Los Angeles texts for inspectors have been used as models by other agencies around the nation. The problem with this is that training personnel tends to be a rather costly endeavor, even though there are significant long-term benefits relative to the overall quality of community structures.

As in the application phase, the provision of citizen informational materials, the use of project coordinators, and the computerization of permit data in the plan review phase are additional agency innovations which tend to expedite citizen passage through regulatory roadblocks. These features are particularly salient for those citizens who are unfamiliar with existing procedures or for those who have little financial cushion on which to fall back should permitting stretch out over time. An additional, albeit somewhat less important factor tending to assist citizens over regulatory hurdles, is the clarity of physical identifiers staking out the appropriate regulatory review stations. This can be particularly helpful in those older and larger communities which have bureaucracies spread throughout the city or county.

For example a recurrent complaint voiced by Tampa system users was that, in the absence of decent explanatory pamphlets and brochures, they had difficulty tracking down appropriate plan review stations within the dispersed building regulatory bureaucracy. Plan examiners were tucked away in the far recesses of rented office buildings and their offices and functions were not clearly indicated. Thus, if there was a problem with the detail on a working drawing, citizens were often hard put to locate the right plan examiner's cubbyhole

This was particularly grating to first-time "do-it-yourselfers," who, because of escalating construction costs, have been increasingly prevalent among those seeking permits. Moreover, hidden offices tended to inhibit housewives, often sent to retrieve permits for working husbands, and reinforced the attitude the city business was conducted within dark rabbit warrens and backrooms.

Some communities, such as San Diego, Chicago, and St. Louis County, have utilized a variety of super wall graphics, displays and signage to route citizens through permitting processes generally and to identify plan review stations in particular. Moreover, when city or county offices are all located in one or two structures, such as in small communities, easy identification of offices can be an important traffic-flow control device.

Construction Inspection Phase

If the latter two phases largely consist of processing the paper personalities of agency clients, the next two phases are made up of "actualizing" the paper personalities that have been created

It is from the field activities of its personnel--building inspectors--that the building inspection department takes on the primary characteristics of a "street-level" bureaucracy. Thus, the inspector is called upon to interact constantly with citizens and exercise independence and discretion in making decisions which have significant impacts upon those citizens (Lipsky 1976). Moreover, the inspector is expected to transform citizens into clients via the decision to categorize a client in one way or another" (Prottas 1979, p. 4).

Citizens become clients during this phase as their work products undergo a series of inspections designed to establish, ultimately, the integrity of the structure and its component parts. Unlike the previous phases, construction inspection entails a balanced interaction between the client and regulatory personnel. Indeed, the inspection phases involve a patterned sequence of activity, rhythmically linking together the public and private actors over time. It is something akin to the ritualistic dance of a tribal group, in which antagonists and protagonists conduct mock combat, guided by the tattoo of the village drumbeat. In this instance, however, the drum is the building code while the combative drive is fueled by the profit motive, not ancestral animosity.

While there is this balance, each sub-phase of inspectional activity is initiated, typically, by the client who has completed a substantive part of the construction. It is, therefore, up to the builder (or the contractor or sub-contractor) to contact the building department and request an inspection. For example (as Figure 5 shows), once the building permit has been obtained the general contractor can proceed to pour the footings and lay the foundation for the structure. This triggers the first site visit--the foundation inspection. If the builder "passes" this test, he can proceed with the next step, the 'rough-in' where the basic plumbing, water and sewer hook-ups are installed. To proceed further, this sub-phase must be approved by the plumbing inspector (assuming that inspectors are not cross-trained), who inspects the work. If passed, the inspector will check off and initial the building permit posted at the site. In addition, he will keep one copy of the transaction for his own records, and will submit another copy to the building bureau's central file--which keeps tabs on the entire process. This procedure continues throughout the course of construction, assuming that the builder is not "red-tagged" or forced to halt progress to remedy a construction defect observed by the inspector. If this occurs, no further inspections can take place until the violation is removed. The construction inspection phase terminates, ultimately, when the structure passes the roof inspection. At this point the building and associated mechanical, electrical, and plumbing systems are ready for the last phase, final inspection.

If the plan-check phase offers a prime opportunity for political intervention in the permitting process the construction-inspection phase presents particularly tempting opportunities for the financial corruption of inspectors. This is so for several reasons. First, inspector dispersion to building sites around the city or county tends to remove them from the physical control and constraints of the central office. Second, although many building officials try to deny it, building inspectors have significant discretion in the enforcement of codes and regulations. Thus, in face-to-face interactions with builders and developers, each knows that the inspector can--if he so desires--shade code interpretations favorably or unfavorably. Moreover, since most traditional building departments utilize different inspectors for different building systems (e.g. an electrical inspector only works on electrical components), employees only oversee relatively small, unconnected pieces of the entire structure. And, because most construction problems will be "covered up," no one may ever notice that the builder used, for example, one-half inch plywood where the code called for a minimum of three-quarter inch wood. Third, and finally, pay and prestige are low for inspectors, especially in comparison to the potential costs and benefits associated with even modest construction projects. The incentives, therefore, to supplement one's income from other sources can be high. A 1974 New York Department of Investigation report, sparked by the Knapp Commission's findings relative to police corruption, stated that

> In fact, we found that corruption and its cover-up are endemic to the working day of many building inspectors. Throughout their day, they contrive schemes through which they can be bribed and methods for covering up the bribes and gratuities they receive. (Renzel 1974, p. 3)[7]

While corruption may be a fact of life during the construction inspection phases, some communities have instituted measures designed to reduce the incentive to take a bribe. These measures also tend to have a positive impact upon the equity of citizen access to and through inspectional sub-phases since they improve the efficiency of service levels and reduce the potential for arbitrary decision-making by inspectors.

Among the steps taken are the upgrading of pay and fringe benefits for inspectional staff, increasing opportunities for professionalization through provision of in-service education and training, and the cross-training of inspectional personnel so that one or at most two inspectors have virtually complete authority over any one structure. This latter change, a relatively important innovation, increases inspectional efficiency because each inspector tends to become more familiar with the work progress of each job. Consequently, when called to a site, the inspector does not have to take the time to refamiliarize himself with the specifics of the construction. Moreover, because he has seen the structure develop as an integrated system and not in fragments, the inspector is more likely to have a feeling of accomplishment as the work moves toward the final inspection phase, that is, toward "closure." As one cross-trained St Louis County inspector stated to the researcher: "Here, we see the building as a whole, not like my last job [as a plumbing inspector], where I only worked on pieces of buildings."*

While monetary inducements to corruption may remain the same with cross-training, inspectors have an important disincentive to take a bribe. Since they alone have the responsibility for any one structure, it is far easier to pinpoint blame should a construction defect ultimately show up. Lately, this has become extremely significant to community regulatory agencies as barriers to municipal tort liability have begun to fall.

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* Personal communication, November, 1977.

Besides abetting the potential for corruption, traditional, fragmented construction inspection tends to significantly increase the personnel and job scheduling complexity of the overall permitting flow. For example, the plumbing bureau must be sure to daily coordinate the availability of its inspectional personnel with those of the other three bureaus so that enough inspectors are on hand to respond to citizen calls. This leads to operational inefficiency, especially as the size of the organization increases. As Katz and Kahn suggest, the greater the number of communication links in a group, the lower the group's efficiency is likely to be in task performance (1966).

In response to this, some larger or more affluent building departments have implemented computer-assisted inspection monitoring as a means of improving scheduling and coordination between regulatory bureaus. This innovation, a reaction to client demands for prompt response, has also been used to provide optimal routing for inspectors within their districts. Thus, it has energy-saving implications along with other advantages.

The City of Chicago uses a variant of the computerized inspection monitoring system to automatically flag permit applications of individuals who have been cited for inspectional violations on other projects. This prevents repeat offenders from entering the permit system anew. Moreover, Chicago's computer system interfaces with files from its housing standards agency, which inspects existing housing, and as a result flags permit applications of contractors and sub-contractors who have done shoddy rehabilitation work.

Finally, since on-site inspection often involves situations of significant uncertainty in the relationship of building personnel and citizen-clients, progressive agencies have found it beneficial to compile employee procedure manuals which can be referred to as an impartial guide to community policy and agency operations. Such manuals do not, typically, spell out every rule and regulation but rather provide a general guide for the employee (and the client) as to acceptable practices. One community--Freemont, California--compiled such a manual directly from the daily memoranda of the chief building official.

Final Inspection Phase

Final inspection culminates the local building regulatory process. In some senses, it is relatively anticlimatic, for most permitting problems will have been ironed out by this phase. It is, however, possible for the building department, or one of its component bureaus, to withhold final approval contingent upon the removal of certain violations. At this point delay becomes particularly critical since the owner has the most invested in the project in terms of time, money, and sweat.

The aim of final inspection is to obtain the certificate of occupancy which jurisdictions are empowered to issue upon satisfactory compliance with applicable building and zoning codes. This document attests to the structural integrity of the building, its fitness for public or private purposes, and to its conformance with zoning laws authorizing the specific land use proposed in the original building permit application.

To insure that buildings will not be used prior to the issuance of the certificate of occupancy, many jurisdictions forbid power companies to turn on the electricity without notice from a city or county representative. In Tampa, for example, it was the responsibility of a clerk from the electric bureau to notify the Tampa Electric Company (TEC) of a building's impending receipt of the certificate of occupancy. Only then could the structure come on line.

One of the major uses of the occupancy certificate is to restrict the changeovers in existing buildings from authorized to nonconforming uses. Thus, when citizens wish to alter or convert structures, they must obtain building permits in much the same manner as if they were seeking to construct an entirely new building on the site.

Summary

In this Chapter, we have outlined the process by which the building code is implemented. In so doing, we have identified major decision nodes having a bearing upon building regulatory activities and decisions at the national, state, and local government levels. We have also discussed the principal public and private individual and organizational participants to local permitting, depicting where their interests converge and diverge. Using this as a base, we delineated the four phases of the local permitting process, discussing within the first three some of the innovations certain communities have adopted in order to assist client passage over permitting hurdles.

This Chapter establishes a practical, operational framework which interlocks with our theoretical orientations in the next two chapters.

Notes

1 The interconnection of content and process (ends and means) is explicit in Braybrooke and Lindblom's "strategy of disjointed incrementalism" as a description of how policy-making (and the resulting administrative process) occurs. See D. Braybooke and Charles E. Lindblom. 1963. *A Strategy of Decision.* New York: Free Press, Chapter 5. Likewise, the requirement that administrators "satisfice" rather than "maximize" is related to the constraining link between ends and means. See, James G. March and Herbert A. Simon. 1958. *Organizations.* New York: John Wiley and Sons. Thompson notes that:

> In terms of a means-end decision model, our knowledge of the means to ends is always incomplete, and the end changes as our knowledge of the means changes.

See Victor A. Thompson. 1973. "Organizations as Systems." Reprint. Morristown, N.J.: General Learning Press, p. 16. A classic statement on this point was also made by Sayre relative to public personnel administration. See Wallace S. Sayre, 1970. "The Triumph of Techniques over Purpose." In Robert T. Golembiewski and Michael Cohen, eds. *People in Public Service.* Itasca, Ill.: F.E. Peacock Publishers, Inc.

2. With complex or unusual construction, the list of government regulatory agencies that may be involved grows dramatically. For example, the following city departments, divisions and bureaus were found to have participated in permitting, in one form or another, the development of an 8-story apartment building in Tampa:

Department of Housing, Inspections and Community Services (HICS)
Division of Community Improvement
Division of Inspectional Services
Building Bureau
Trees and Landscaping Unit
Zoning Unit
Boiler-Mechanical Bureau
Electrical Bureau
Plumbing/Gas Bureau
Division of Land Management
Land Office
Right-of-Way Office
Department of Water Resources and Public Works
Street Construction Office
Street Design Office
Storm Drainage Office
Traffic Engineering
Sanitary Sewer Department
Sanitation Department

Water Department
Occupational Licensing Division
Planning Department
City Attorney's Office
Fire Marshall's Office
Police Department

See, Earl M. Starnes, John F. Alexander, and Richard H. Schneider, 1977. "Tampa Integrated Permitting and Development Monitoring Systems Phase I: Basic Inventory." Photocopied. Gainesville, Florida.

3. For an elaboration of these points see Field and Ventre, "Local Regulation of Building: Agencies, Codes and Politics," pp. 139-142.

4. See Douglas Warns. 1968. "A Unified Permit Application System." Photocopied, Master's Thesis. Cincinnati, Ohio: University of Cincinnati. Warns discusses the methodology which was used in Hamilton County, Ohio (Cincinnati and its satellite cities) to consolidate a voluminous number of permit application forms into a vastly simplified and standardized single form.

5. The researcher visited San Diego's building inspection department in 1977 to discuss the innovations employed by that agency. Richard Meier, then assistant Director of Building provided a thorough tour of the facility and discussed its administrative and computer components in detail.

Of particular interest was the stress he placed upon the political nature of the urban information system. Meier noted that, in reality, the urban information system is only as useful as its component parts allow it to be through updated, validated data entries. Thus, if a data system is conceived which does not adequately serve the power needs of its contributors (e.g. the Building Inspection Department, the Water Department, Sanitary Sewer, etc.) then the system will simply fall into disrepair and disuse.

For a fascinating discussion of the political and administrative ramifications of municipal information systems, with a special emphasis on San Diego's (both county and city) experience, see Harold H. Haak and W. Richard Bigger. 1970. "Urban Information Systems, Power and Organization." San Diego: Institute of Public and Urban Affairs.

6. This survey was conducted March 24, 1978, in the City of Tampa.

7. See, for further information, the article "City Report Finds Building Industry Infested by Graft," New York Times, November 8, 1974.

CHAPTER V

THEORETICAL ORIENTATIONS

Introduction

The overall research contention of this paper is that local building inspection departments, like other public agencies, are linked to and affected by the environments in which they are located. We suggest that their client orientation patterns, manifested in agency adoption of specific administrative, personnel, informational, and management innovations is shaped by political and community influences mediated by internal organizational orientations and perceptions. While this concept is well established in a substantial body of social science research focused upon certain public and private organizations, it is new in its application to the present agency.

This chapter reviews the theoretical and associated empirical literature upon which our research is grounded. In so doing, we discuss the problems associated with defining organizational innovation and pinpointing its etiology. We also discuss some of the classification schemes which have been used to trace the overall process of innovation. In addition, we review four general approaches to the study of bureaucratic innovation, locating the present research within this typology.

Following this, we discuss some of the broad scale organization and general system theory literature which is at the foundation of our research. This discussion sets the stage for Chapter VI, in which each set of independent variables is presented and linked to more narrow gauge theoretical and empirical work which, we believe, support our overall research assumptions as well as our specific hypotheses.

Overview: The Mystery of Innovation

There are few subjects as intriguing as innovation. In nature innovation produces the adaptive changes upon which biological evolution rests. Similarly, organizational innovation provides new procedures, services, and technologies which fuel the social, political, and economic evolution of society. Both types of innovation have been extremely resistant to investigation and have only slowly yielded their secrets. This is particularly true of the study of organizational innovation. Indeed, it still lacks a general theory, although some pieces have begun to emerge (Becker and Whisler 1967).

The major reason that organizational, or bureaucratic (we use the terms interchangeably) innovation is mysterious is because it is so complex. Thus, as Becker and Whisler note: "Innovation appears to be not a single variable but an attenuated and complex process in which a number of critical variables are likely operating" (1967, p. 469). This complexity has added immeasurably to definition problems, spawning a range of responses from many researchers.

Definitions of Organizational Innovation

Shepard, for example, believes organizational innovation to have occurred when an agency learns to do something it did not know how to do before (Shepard 1967). Thompson is more explicit in breaking down the overall process of innovation, defining it as, "the generation, acceptance and implementation of new ideas, processes, products or services" (Thompson 1969, p. 6). Evan and Black define innovation relative to those factors associated with the adoption or rejection of specific proposals. Thus, they see organizational innovation as the implementation of new procedures and ideas (1967).

Sapolsky cuts closer to the heart of the matter, in our view, by adopting Wilson's definition of innovation as "a fundamental change in a significant number of tasks" (1967, p. 498).[1] Both "fundamental" and "significant" are further defined as they relate to the organization's costs of innovating by spending scarce inducements.

In research on departmental autonomy in medical schools, Carroll viewed innovation much as Wilson and Sapolsky. To her it is part and parcel of a social process which initiates a major change in an organization's structure or procedures (Carroll 1967). Becker and Stafford, analyzing the correlates of organizational efficiency of savings and loan associations, operationalize innovation as the early or first adoption of a change new to an organization and to the relevant environment (Becker and Stafford 1967).

Other researchers such as Brown, Maclaurin, and Mansfield use "innovation" in relation to the effect of market structure on the production of inventions and the adoption of technological change in products or production processes (Brown 1957, Maclaurin 1950, Mansfield 1963).

It should be clear that, while all the preceding definitions and usages of the term innovation are similar to a certain extent, there are few distinctions made between innovation, invention, change, or adaptation. For our purposes we believe that a working definition of the term involves a composite of the above definitions. Thus, we believe innovation to be a process by which a significant change in products, services, processes, structures, or personnel management is adopted by a particular organization. We stress the idea that change must be significant in order for it to be considered innovation. That is because organizations are always in the process of making minor changes--adjustments--to fit external environments. Change must involve, as Wilson has predicated, substantial organizational risks if it is to be innovation. And, while it makes no difference to the present research, we reject the idea that the change must be "new." In our view, since regulatory environments are always in flux, the readoption of a once discredited procedure, structure, or operation can be as innovative (and risky) as first or early use of new procedure, structure or operation.

The Stages of Innovation

We suggest in our definition that organizational innovation is a process. While, we believe, that it involves the process of creativity--which culminates in invention--we believe that is subsumes the latter. That is because organizational innovation is a group process whereas invention is the product of discrete individuals. Because of this added complexity, innovation is all the more problematical. Most researchers agree, however, that innovation probably procedes in relatively distinct stages, although the same researchers disagree as to what these stages are.

For example, Knight suggests that organizational innovation consists of two major phases: "(1) the creation of the idea and its development and (2) the introduction and adoption of the idea" (1967, p. 488). A substantial amount of research has been devoted to the conditions which supposedly predispose individuals to create and develop new ideas.[2] A lesser body of study has been directed to the second phase. What is particularly noteworthy are the very different circumstances which tend to surround each phase. For one thing, the creators of an idea are not usually its "innovators" within the organization. For another, the processes of individual creativity and organizational innovation are thought to be quite antagonistic to each other. James Q. Wilson summarized the dilemma for organization designers which results from this insomuch as he suggests that those factors which increase the probability that organizational participants will create and bring forward new ideas, are just those factors which decrease the probability that the organization will adopt the proposals (1966). In his important theoretical work on organizational innovation, Thompson expands this point further (1969). We shall return to it in discussing our findings and conclusions from our field data.

Robert K. Yin presents a classification scheme for tracing the "life history" of bureaucratic innovations (1979, p. 1). His interest is in understanding how innovations become incorporated and merged within the day-to-day practices of local government agencies. According to Yin, an "innovation that has been integrated into standard practice has generally passed through three phases of change:

> 1. Initiation and adoption. A specific series of events occurred, during which the innovation was considered for adoption, some pilot testing may have occurred on a small-scale basis, and the results of that testing resulted in a decision to adopt the innovation.
>
> 2. Implementation. A subsequent series of events occurred, during which broader support for the innovation was developed, plans were made for instructing and training relevant practitioners throughout the service; the innovation was introduced as widely as resources would permit, and implementation results were monitored.
>
> 3. Routinization. Another series of events occurred, as a result of which the innovation no longer appeared as an innovation but became part of the common services routinely provided. (One characteristic of this stage is when a local agency can no longer return to a previous way of doing business, although some new innovation may occur to supplant the routinized one.) (Yin 1979, p. 4)

In Yin's view, bureaucratic change cannot fully be appreciated without considering the problems inherent in making such changes part of the daily routine of service delivery agencies. For our purposes, although our survey instrument does not specifically address the question of routinization, we make the assumption that unless otherwise noted in an open-ended response, all innovations have been incorporated within daily practices.

A final classification scheme for analyzing the stages of organizational innovation is that presented by Becker and Whisler. In summarizing other theorists, Becker and Whisler suggest that innovation is divided into four stages--stimulus, conception, proposal, and adoption. The first three stages are the products of individual action while the last is strictly a group process.

> Something internal or external provides a stimulus, an individual conceives a proposal for innovative action, he makes his proposal to fellow members of the organization, and a political process ensues which results in either adoption or rejection of the proposal. (Becker and Whisler 1967, p. 467)

The authors bemoan the fact that there is no adequate theory of organizational innovation which ties together the internal psychological inputs and external environmental inputs into a coherent explanation of innovation adoptions or subsequent agency outputs. They conclude, sadly, that "organizational theory is still in a primitive, parochial era" (Becker and Whisler 1967, p. 467).

Approaches to Studying Organizational Innovation

Despite the above pessimistic view of the state-of-the-art of organization theory, there have been significant advances during the last decade in the theoretical and empirical work resulting from the study of organization/bureaucratic innovation. As Yin notes, most of this work is dominated by four different study approaches

(1) Innovative Organizations

(2) Research, Development and Diffusion

(3) Social Interaction

(4) Organizational Change (1979).

The present research of local building regulatory agency innovation was conducted using a modified "innovative organization" approach, although valuable components from the other approaches were selectively used.

Innovative Organizations

The theory behind this technique is that one can identify some of the critical external environmental and internal organizational variables associated with a set of innovative organizations. From this linkage the researcher can then develop inferential scenarios of the innovation process. Previous studies which have generally utilized this approach are Tannen and Roger's study of health care system innovations (1975) and Burns and Stalker's research on the differences between mechanistic and organic organizations (1961).

The latter study is interesting insomuch as the authors suggest that the "mechanistic" organization, characterized by highly differentiated internal units, a strongly hierarchical and formal structure, and an inwardly directly management approach, is not likely to be innovative relative to the "organic" organization which has the opposite characteristics. This finding parallels Thompson's theoretical notion that "monocratic," production-oriented organizations provide rather barren ground for innovative processes (Thompson 1969, p. 15).

Other, related innovative organization characteristics studies have been compiled by Rowe and Boise (1973 and 1974), Rothman (1974) and Public Affairs Counseling (1976).

Although some researchers have pointed out problems with the innovative organization approach, namely that the data tend to produce a static portrayal of the agencies (e.g. "snapshots"), and that one must infer rather than observe innovation processes, the approach nevertheless "provide[s] a possible starting point for studying [innovation] implementation and routinization" (Yin 1979, p. 374). In addition, this technique tends to be more cost and time effective than the three other techniques outlined below.

Research, Development and Diffusion

The research, development and diffusion ("R,D & D") approach sees the innovative process within an institutional framework and traces it from its inception in the basic research phase, to its developed application on a particular problem, and ultimately through its diffusion to a user group and its adoption by the groups. The R,D & D approach has been best articulated in studies of educational and local service delivery innovation processes.

For example, Honsa (1974) examined the politics associated with federal initiatives and innovations in education using this approach. Radnor (1975) used this technique in attempting to pinpoint institutional problems resulting from the production and implementation of change in local law enforcement services. While the R,D & D approach is helpful in drawing attention, on a macro level, to the problems associated with the coordination of institutions relative to an "evolving" innovation, it has been criticized because it directs too much attention to the influence of external environments on the adoption of innovation. Thus, say its detractors, the important role of adopting organizations and individuals is minimized too much.

Social Interaction

On the opposite end of the spectrum, this approach to the study of organizational innovation maximizes the role of individuals. It is a micro view focusing upon the interlocking communications network which passes innovation information between and among individuals. This approach has been primarily used in diffusion studies (Rogers and Shoemaker 1971), such as efforts to examine the decisions of farmers to use new agricultural techniques, or doctors to recommend a new drug.

Because of its small scale focus, the social interaction approach has been criticized for its inapplicability to organizations. This is so despite efforts by some researchers to extend its utility by applying it in situations where individual actions may be construed as organizational actors. For example, Walker's study of the passage of innovative laws in state legislatures is one such attempt (1969). But, by and large, innovation is deemed more a group rather than an individual process, particularly when one is examining a service delivery agency.

Organizational Change

This final approach might be termed a "process" view of innovation. By looking at organizational events which take place before and during change, the innovation process is seen as but one variant of overall change. This is fundamentally a "problem-solving" approach which focuses upon both individual and group conflict which results in organizational movement, and ultimately innovation.

Yin (1979) suggests that the organizational change approach may be broken down into four stages: the prior stage (the organization before change), initiation (planning for change), implementation (the occurrence of change), and routinization (establishment of change as a stable part of normal procedures). Works by Hage and Aiken (1970), Mann and Neff (1961), Barnes (1971), and Berman and McLaughlin (1974) have advocated the organizational change approach, although the stage (or phase) names have been somewhat different than those used by Yin

A major criticism of the organization change approach is that it is extremely costly and time consuming to utilize in field research. Moreover, without being privy to a great deal of internal organization information, one is forced to infer a great deal about the nature of interpersonal conflict, and its consequences for either change or innovation

In sum, although the present research theory and technique relies heavily on the innovative organization approach, we have borrowed from the other concepts outlined above. Thus, our independent variables reflect our belief that certain characteristics associated with innovation can indeed be identified for a discrete group or for organizations. Further, we suggest that such variables can be located by their external environmental influences (e.g. through political and community impacts) as well as by internal factors (e.g. organizational and individual characteristics), although we cannot necessarily casually connect macro-external and micro-internal variables. With this overview in mind, we now turn our discussion to the underlying theory and empirical evidence supporting our independent variables

Foundations for the Innovative Organization Approach to the Present Study

Following the innovative organization approach discussed above, our research postulates that three sets of critical independent variables act in concert to predispose building regulatory agencies to adopt and use innovative administrative, personnel, informational and management features. These sets--two external environmental, and one internal organizational--each contain three subsets. The subsets, in turn, contain a total of 11 variables which have been operationalized as indicators of the relationships we are hypothesizing.

To introduce the narrow guage theoretical foundations on which our variable sets are based, we begin with a discussion of the broader theory that organizations in general, and public agencies in particular, are influenced by their external environments. To illustrate this we examine the public administrative-politics dichotomy suggested by early organizational theorists. Following this, we trace the general systems approach as it has been used to organize the relationship of external environmental factors and internal conversion processes. Within that context we use an example from our field research to illustrate the complex linkage of organization innovation and environmental feedback.

The Politics-Administration Dichotomy

A standard refrain of permitting process clients is that the agencies do not administer the building codes in a neutral, "business-like" manner. As one builder expressed to the researcher, "If these organizations (building inspection departments) really did their jobs as *they should*, that is, without political or outside pressures, then getting a permit would be a snap" (emphasis supplied).*

This notion, shared by more than a few citizens about their public agencies, harkens back to an earlier era of public administration theory. The essence of that view was bluntly stated by Woodrow Wilson:

> The field of administration is a field of business. It is removed from the hurry and strife of politics . . . *administrative questions are not political questions.* Although politics sets the task for administration, it should not be suffered to manipulate its offices . . . Policy does nothing without the aid of administration; but administration is not therefore politics (Altshuler 1968, p. 56).[3]

According to this "classical" approach to public administration there was and should be an immutable dichotomy between politics and administration. Bolstered by the growing push for a "scientific management" strategy in public and private organizations, the classical notion captured the imagination of scholars and administrators for several decades in the early part of this century.[4]

Although obviously eschewing the linkage of politics with administration, the Wilsonian dichotomy also implicitly denied that public organizations--bureaucracies--were or should be subject to any environmental influences. Thus, bureaucracies were rational, neutral instruments--tools--of the state which executed without question or qualm the policies passed down from the political apparatus.[5] They were thought to be aloof and apart from the environments in which they functioned.

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* Personal Communication, July, 1978

It was not until shortly before World War II that this overly optomistic, normative view of public agencies and organizations in general began to be called into question. The impetus for reexamination came from the famous Hawthorne Studies, conducted at Western Electric Company's Chicago assembly plant from 1927 to 1932.[6] From field observations there, researchers began to conclude that there were other dimensions to work beyond the legal structure (or blueprint) or the organization and the economic motivations of its employees. The human side had been ignored. Organizations, even public bureaucracies, were seen to encompass complicated social systems which had lives of their own. The discovery of this informal counterpart to the formal system heralded not only the rise of the Human Relations School, but aroused the suspicion among many scholars that organization behavior was a product of many complex and interrelated environmental factors.

General Systems Approach

An appropriate analytic framework was needed in which to order the relationship of these factors. For some public administrative theorists, this framework emerged in the form of the general systems model.

First formulated by von Bertalanffy in the 1930's, as a 'logico-mathematical field whose task is the formulation and derivation of those general principles that are applicable to systems," the utility of the model was readily acknowledged by many theorists, including those in the policy sciences (1956, p. 2). Using the general systems approach, Easton virtually revolutionized the way political scientists viewed their own disciplines (1958). Scholars of public administration such as Rourke (1965), Riggs (1964), Rehfuss (1973) and Sharkansky (1975) early on adopted Easton's "revised" general systems "model" as a tool with which to pick apart and analyze the behavior of public organizations as they operate within their environments. On the private side, organization researchers such as Dill (1958), Leavitt (1962), Burns and Stalker (1961), Woodward (1965), Thompson (1967), and Lawrence and Lorsch (1967) utilized system frameworks in analyses of the relationships between business organizations and environmental influences.

To both groups the organization is seen as a complex system in constant interaction with its environment. It is thus an open system, receiving environmental "inputs" and converting these into "outputs."

Public administration/political science models classify inputs into two types--demands and supports. Demands may be requested for goods or services by interest groups and constituents, or they may be for agency behaviors or stances (attitudes) on the behalf of a particular sector of the public. Supports may be: (1)

appropriations, (2) favorable pronouncements by interest groups or the public in general, (3) conformity by the public to agency-related laws or rules, or (4) commitments by groups and individuals to organization goals. Outputs are the subsequent production of tangible goods, services, regulations, and symbols.[7]

This model is a sharp contrast to the narrow, deterministic, rigid and closed version of the organization as proposed by Wilson and his intellectual allies Taylor, Gulick, Urwick and Weber. In the modern, empirically-based view, the organization is a flexible system which, much like a biological organism, reacts to environmental conditions in order to survive.

Survival depends upon a number of crucial factors in the systems model. For one thing, the organization must maintain a "dynamic equilibrium" by constantly balancing demands and supports. To do this, the organization's conversion system--it's "brain"--must be able to correctly interpret and convert the "feedback" it receives from its environment. Feedback is created by the responses generated by agency outputs. Feedback is integral to the concept of system theory as well as to agency survival because its conversion provides the principal justification for many decisions made within the organization about outputs to be produced in the future.

Once interpreted and processed, feedback may result in new or modified agency outputs. The nature of the feedback evoked from the environment by a specific output can have a critical impact on the future of the administrative agency. As Davis and Dolbeare note

> Where there is a feedback problem, there may also be a support problem, if popular preferences can't be expressed, if there is no way to focus desires on a major government function, then the function is threatened with a loss of support. (1968, p. 275)

Thus, the level of positive or negative response elicited by the output may have a direct bearing upon the degree of modification or organization behavior that is required to reach formal or informal agency goals. If the agency is incapable of changing its behavior to drum-up positive supports, and is not accomplishing its formal goals, then its informal goal--survival--is in jeopardy.

Because the systems model predicates an equilibrium (or steady state) of demands and supports for organizational maintenance, a sustained imbalance may force it to alter its goals (legitimately or otherwise) or undertake innovative adaptation in order to meet survival requirements. But organizational innovation may create additional, unanticipated problems and consequences. Blau reports:

> Even if there were a perfect organization with no problems, changes in the external environment would soon create some. But internal as well as external conditions generate change in the organization since innovations instituted to solve one problem have a variety of repercussions, some of which are likely to produce other problems. (1957, p. 57)

When agencies are particularly complex and have established numerous linkage points with other organizations within their "set" (Caplow 1964), innovations can be extremely difficult to implement. One change, no matter how beneficial to improving the initiating agency's support among client groups, can produce unwanted ripples throughout the set, and ultimately within the overall environment.

For example, when in 1977, the City of Tampa's building inspection department proposed to computerize its permitting records in response to user demands to speed-up permitting, the change was strongly, albeit covertly opposed, by a host of other city development management agencies (e.g. the Fire Marshall, Traffic Engineering, Occupational Licensing, Water and Sanitary Sewer Departments). Their opposition was based on two factors.

First, since the issuance of building permits often required their approvals, agency heads believed they would ultimately be forced to computerize their own operations and this would cut deeply into already strained budgets. Since they were not under attack from citizen groups, they saw no need to change. Second, in a city noted for entrenched and autonomous bureaucracies, agency heads viewed the automated, routine sharing of information which would be necessary as a significant threat to their own power. Through liaisons in the Mayor's office they succeeded in pressuring for a delay in putting the plan into effect. As a result, permitting computerization was shelved. It was, however, later implemented on a limited basis.[9] But, the mere fact that the building inspection department initiated a major study of its own operations (which resulted in the computer plan) had a symbolic value which in itself helped raise support levels for the agency among its most persistent critics.

If public agencies, such as Tampa's building inspection department, were to be classified by the environmental milieu in which they operated, they probably would fall within Emergy and Trist's "turbulent field" category (1965, p. 25). This category, part of a fourfold typology developed by the researchers, presents organizations as part of an extremely dynamic environment in which there are ever-changing interactions between components (agencies) and systems (e g, political, social, environmental, technical) Because of this complexity, the researchers suggest that the study of one part cannot explain the others Thus, individual analysis cannot predict group behavior, nor can analysis of the components explain the total system environment.

In large part, this accurately represents the problem of analyzing organization behavior within the environmental context. Although general system theory can give direction as to the flow of decisions and influences while illustrating interrelationships among macro components, it cannot adequately explain individual, group or agency behaviors under specific environmental conditions. This is left to more narrow guage theory which concentrates upon specific components and systems It is with this more constrained focus that we turn in the next chapter directly to the literature which directly supports our independent variables--political, community, and organizational--and their presumed relationships with agency innovations

Summary

This Chapter has discussed definitions of organizational innovation as proposed by various researchers, as well as classification schemes to break down and analyze the change process within complex agencies. We have presented four traditional approaches used to study innovation--innovative organization, research, development, and diffusion, social interaction, and organizational change--and have identified the present research as belonging, primarily, to the first approach.

Within the context of the innovative organization approach, we also have presented broad scale political and public administration systems framework in which we view the overall relationships of our variable sets

Notes

1. See Harvey M. Sapolsky. October, 1967. "Organizational Structure and Innovation." Journal of Business, LX, No. 4: 497-510. The phrase is borrowed from James Q. Wilson. 1966. "Innovation in Organizations: Notes Toward a Theory," in *Organizational Design*, ed., James D. Thompson. Pittsburgh, University of Pittsburgh Press.

2. Relative to the process and progress of creativity in the individual, see Sidney J. Parnes and J. F. Harding, eds., 1962. *A Source Book for Creative Thinking*. New York: Charles Scribner's Sons. See also C. W. Taylor, ed., 1964. *Creativity: Progress and Potential*. New York: McGraw-Hill Book Co.

   A slightly older but equally good text is M. I. Stein and S. J. Heinze. 1960. *Creativity and the Individual*. Glencoe, Ill.: Free Press.

3. Woodrow Wilson as quoted in Alan A. Altshuler. 1968. "The Study of American Public Administration," in *The Politics of the Federal Bureaucracy*, ed. Alan A. Altshuler. New York: Dodd, Mead, and Co.

4. Chief proponent of this approach was Frederick J. Taylor, the father of "Taylorism." This concept suggested that operational 'efficiency' could be achieved in organizations by a scientific, cost-benefit analysis of the tasks to be performed by workers. Rewards--monitary incentives--could then be scaled so that they were appropriate to the task. Thus, Taylorism suggested that the worker was foremost an 'economic man" whose behavior could best be controlled by fiscal rewards and who was limited only by physical fatigue in his ability to comply with managerial directives. While Taylorism was first proposed as applicable to the private, assembly-line type organizations, its simplistic tenents were soon adapted by theorists and practitioners of public administration; its single-minded approach gave major impetus to a theoretical backlash, later epitomized in the "Human Relations School' approach.

See Frederick J. Taylor. 1911. *Scientific Management*. New York: Harper. See also, L. H. Gulick and L. Urwick. 1937. *Papers on the Science of Administration*. New York: Institute of Public Administration.

5 Thompson is particularly fond of using the notion of the "tool" to describe both the worker and the organization as perceived within the 'monocratic" framework. See Victor A. Thompson. 1974. "The Development of Modern Bureaucracy: Tools out of People," Morristown, N.J.: General Learning Press.

6. See George C. Homans. 1961. 'The Western Electric Researches.' In *Human Factors in Management*. ed. Schuyler Dean Haslett. New York: Harper.

7 For an excellent synopsis of the systems view of public administration see Chapter 1 of Ira Sharkansky. 1975. *Public Administration*. 3rd ed., Chicago: Rand McNally.

8 Of 64 recommendations made to the City of Tampa relative to streamlining their permitting, inspections, licensing and development monitoring systems, 17 or 26.6 percent dealt directly with the initiation of a permit-based urban information system (UIS). On a follow-up visit to the City in June, 1979, the researcher learned that about half of these recommendations had been implemented.

CHAPTER VI

THEORETICAL AND EMPIRICAL RATIONALES LINKING THE VARIABLES

Introduction

This chapter examines each of the independent variables in detail, and presents our reasoning behind their linkage to the dependent sets. We conclude the chapter with a matrix which depicts the direction and intensity of the suggested associations.

Set I: Political Variables

Within this set we suggest that three factors are related to the propensity of local building regulatory agencies to adopt and implement (routinize) innovations which affect citizen access to and through construction regulatory permitting processes. These factors are the formal centralization of power, measured by the type of local government structure, the autonomy of agency decision-making, measured by how much agency heads perceive permitting processes to be subject to strong political pressure, and the attitude of agency heads toward "distributive regulation," indicated by their acceptance or rejection of variable enforcement practices toward certain classes of clients.

Formal Centralization of Power: Local Government Structure

Our contention here is relatively straightforward. The concentration of dispersion of community political power tends to be associated with local government structural type. As power becomes more concentrated, the empirical evidence supports the notion that innovations are easier to adopt by communities. Hence, we hypothesize that communities which have governmental structures associated with power centralization will have agencies which utilize more innovative building regulatory procedures and processes.

Studies of bureaucratic innovation have repeatedly concluded that while the milieu best suited to the generation of creative ideas is pluralistic and dynamic, the environment most conducive to the adoption of innovation is one in which power is concentrated and predictable (Wilson 1966, Sapolsky 1967, Thompson 1969). Linked to this, though at a larger scale, are community power studies by Clark (1971), Hawley (1963), Crain and Rosenthal (1967), and Aiken and Alford (1970) which suggest that the greater the concentration of power in a community, the more likely it is to adopt policy innovations. This is particularly true, according to Clark, if the issues involved are "fragile," or those potentially controversial based upon their newness or degree of innovation (Clark 1971).

Based upon these findings, we suggested that communities with more centralized power structures will be more likely to adopt innovation building regulatory processes and procedures. Given the close scrutiny these processes and procedures receive from the building, development, trade and professional communities they serve and regulate, we feel that they do indeed involve "fragile" issues, although this may not be perceived as such by the community as a whole.

To operationalize our hypothesis, we have chosen as an indicator the type of local governmental structure in which the regulatory system operates. Although we realize that the community power dimension can be measured through informal leadership studies (e.g. using one or a combination of the traditional methodologies--positional, reputational, or decisional), we have chosen the latter indicator for cost and time reasons. Despite this, previous research has shown the type of local governmental structure--"reformed" structures versus "unreformed"--to be a reasonably good indicator of the centralization or dispersion of power in localities.

For example, Lineberry and Sharkansky report that "governmental reformism, particularly nonpartisanship, is associated with monolithic power structure" (Lineberry and Sharkansky 1974, p. 144). And, Walton's investigation of community organizations and power structure revealed a strong association between local party competition, a characteristic of unreformed governments, and pluralistic power structures (1967).[1]

We suspect, therefore, that since power tends to be centralized more in reformed, council-manager governments, these will be more likely to have adopted a higher proportion of the innovative procedures and features identified by our dependent variables, than will unreformed, mayor-council governments.

Naturally, we also suspect that power centralization in reformed cities and the resulting desire and ability to adopt and use new managerial and administrative techniques is also related to the stress managers in these systems tend to place, overtly at least, on professionalism as opposed to politics in the handling of local service delivery and regulatory matters. Thus, city bureaucrats such as building officials ought to be buffered against political influence in manager systems since the structure is less "permeable" than mayor-council structures. We shall discuss this general concept in more detail when we consider the organization set variables.

Finally, we have chosen the council-manager indicator as a measure of reformism since research has shown that, "the vast majority of council-manager cities have also adopted the other reform measures" (Swanson and Swanson 1977, p. 146). Consequently, council-manager are far more likely to have non-partisan elections and at large constituencies than mayor-council or commission structure cities.

Autonomy of Decision-Making: Political Pressures

Although Downs noted that "few bureaus ever achieve such perfect autonomy that they are immune from threats to their survival" (Downs 1967, p. 9), it is important for agency heads to be sufficiently secure in their own decision-making that they will risk the uncertainty of innovation. This is particularly true for "street-level bureaucrats," who are often subject to extreme political and environmental demands pressed upon them by clients and by organizational rule structures (Lipsky 1976).[2]

When viewed in this context, we consider the relative decisional autonomy of building regulatory officials from political interference as a form of political "slack" or psychological freedom which allows them the latitude to attempt innovation. This is crucial since although autonomy is pursued by bureaucrats as an end in itself, it can also have extrinsic value as a promoter of change by freeing up scarce resources and by encouraging decisional discretion.

For example, March and Simon conclude, after reviewing studies of worker satisfaction, that a feeling of job independence is a fundamental basis of job satisfaction (1958, p. 58). This finding is echoed by Thompson, who argues that protecting and enlarging one's sphere of independent action is a vital motivation of discretionary decision-making (Thompson 1969). The latter point is germane to bureaucrats, as Sayre and Kaufman note, "especially as they mature in their organization and in their self-awareness as cohesive groups [they] share with all other groups the aspiration to be self-sufficient and autonomous. In fact, bureaucracies appear to present one of the strongest expressions of this general tendency" (1960, p. 405).

Thus, workers in general and bureaucrats in particular tend to resent 'close supervision' which interferes with the drive toward autonomy (Gouldner 1964, p. 159).[3]

Prottas suggests that aside from any extrinsic value, autonomy has the instrumental value of providing street-level bureaucrats with a "hedge against unpredictability" (Prottas 1979, p. 112). Since such bureaucrats typically do not know how many clients they must deal with each day, nor the time necessary to devote to each, they must be allowed flexibility to deal with "problem cases" which take an inordinate amount of time and effort. Autonomy allows this leeway.

Relative to innovation, we suggest that decision autonomy provides an analogous leeway for agency heads. We consider this to be a 'hedge against the diminution of authority,' inasmuch as it provides building regulatory officials with the assurance that once they have made a decision it will not be countermanded, legitimately or otherwise, by political pressures exerted from outside the organization.

An example of this is drawn from the researcher's experience with the City of Tampa's building regulatory agency. On a confidential survey more than 30 percent of the agency's employees (11 individuals) indicated that they had been subjected to political pressures which forced them to approve permits or gloss over plan review problems for certain well-connected citizens, contrary to city ordinances. When department heads were subsequently interviewed further on this point, it became apparent to the researcher that there was a substantial amount of resentment about this interference.

The reason for this was that (1) political interference with the permitting process served to reinforce to employees their own status as non-professionals, and more significantly, (2) since department heads' decisions were subject to be overturned on political and not technical reasons their authority vis-a-vis employees was significantly undermined. Decision-making was frought with extreme uncertainty insomuch as agency heads were always subject to being embarassed by 'a call from the Mayor's office."

As a consequence of this, any procedural or structural changes which involved substantial added uncertainties were carefully avoided by agency heads. Rather, more attention was devoted to elaborating further the already ponderous and ineffecient record-keeping systems and keeping 'one's nose clean,' that is, staying on the right side of the political fence. It was only on the election of a more "business-like" Mayor in 1976, who brought to the city a budget director who served as a quasi-city-manager, that the impetus for innovation was felt within Tampa's building regulatory agencies. One of the budget director's first acts was to replace the old head of the building inspection department with a "young Turk," giving him a free-hand to make changes and publically vowing that the agency would be free from political interference.

In sum, we suspect that there is a significant link between innovation and organizational autonomy. Moreover, we suggest that this autonomy, in street level bureaucracies, can be operationalized by assessing the perception of agency heads about political interference with agency operations. These perceptions, we believe, can tell us a good deal about whether or not an agency's political environment is supportive of high risk, innovative behavior.

Distributive Regulation Variable Enforcement

James Q Wilson's classic analysis of law enforcement in eight American cities resulted in a three-fold typology of police organization behavioral styles (1973). These were the "watchman, service, and legalistic" styles, each containing a range of characteristics which, when put together, culminate in a particular orientation to the public One important characteristic--indicator--of the watchman police department was the attitude of patrolmen and administrators that justice could and should be meted out to individual offenders according to their social status This concept, termed 'distributive justice," meant that the police eschewed the universalistic standards favored by "legalistic' police department, and enforced the law with highly particularistic notions of justice.

For example, the decision of police to intervene and the techniques of police intervention in the watchman force were variable, yet generally predictable. A typical pattern for an order disturbance violation, say a loud party, would be an informal counseling session for juveniles, rough treatment for adult minority group members to "keep them in line" or a polite warning to middle class or elite community members. As Wilson makes clear, this approach to 'keeping the peace" was congruent with informal police organization goals, i e "don't rock the boat,' with the primary formal police objective, i.e, "maintain order, and with dominant community justice values, transmitted by implicit and explicit political cues and commands, which favored the informal resolution of disputes, disturbances and conflict in non-serious situations such as public intoxication, fights, gambling, and other peace disturbances (Wilson 1973, pp 140-171) Thus, arrest rates in 'watchman' communities were very low compared to "legalistic' or "service" style jurisdictions.

Distributive justice, and its acceptance by administrators, is related to what we term distributive regulation in the enforcement of building code requirements Though it is not the same as Lowi's concept of "distributive policymaking" (1972) it shares something of its essence insomuch as we suggest that public benefits are directly provided to certain individuals. In our notion, however, such benefits are not doled out in terms of tax revenues but rather in favorable enforcement policies which require higher (or lower) standards of job performance for certain classes of regulatory clients.

This basically illegitimate approach might be termed corruption if funds or gifts are passed between the inspectee and inspector. Though that does indeed occur with some regularity in construction regulation, we are not talking about this[4] What we are focusing upon is the agency policy which, informally though explicitly stated, allows large, often local developers, builders, and contractors far more latitude in the quality of work they produce as compared with smaller, out-of-town firms We also suggest that this enforcement leeway extends to homeowners who draw their own plans and do their own home improvement work.

This is a policy decision, we believe, since some agency heads readily acknowledge distributive regulation to be a fact of life adopted in "the best interests of the community ' Thus, certain developers, builders, and subcontractors find the local regulatory atmosphere to be compatible with their own interests and are more inclined to work in the area. An implicit assumption here is, of course, that physical growth and development in the community is uniformly good. That this assumption is not necessarily valid need not be elaborated.

In some circumstances distributive regulation, combined with local economic pressures, can result in near disaster for the entire administrative structure. An example of this is provided by an incident described at the first consultative council meeting of the National Institute of Building Sciences (NIBS) held in Chicago, in October 1979. The researcher was a participant in this conference.

In discussing the problems of detecting construction defects, Thomas H. Stanton, an attorney representing the Federal Trade Commission, noted the situation which had taken place in Prince George County, Virginia between 1974 and 1977.

During 1974-75 tight money for construction loans provided little opportunity for either builders or buyers. However, by 1976 credit restrictions had eased and the demand for new housing which had pent up over the preceeding years culminated in a building boom. Large single-family housing and rental projects sprang up overnight, overwhelming the existing land use and construction regulatory agencies. Public policy strongly favored this growth by loosening zoning and other building restrictions and by tacit cues to building officials to 'look the other way' on non-serious violations of local development ordinances.

In the incident in question, a building inspector performed construction inspections of a very large multi-family project, certifying all structures as fit for occupancy. However, once the public began moving in scores of defects became noticeable. The inspection department refused to acknowledge the problem until 150 renters demonstrated at a county commission meeting. The resulting publicity and political heat forced the department of take a new look at this as well as other, less visible, problem areas related to housing and building. A new inspector was hired by the department and publicly charged with reviewing the offending structure.

On a reinspection of the project more than 2,500 defects were uncovered. Upon this news, the original building inspector was fired along with several top officials in the building inspection department. However, the inspector felt he was not to blame for the situation and proceeded through his union's grievance procedure.

A joint union-management committee ultimately decided that the inspector should have his job back. The reasoning was that he was neither incompetent, negligent or corrupt. Rather, he had been carrying out the explicit, though "informal" orders of his superiors not "to stop progress" in Prince George County by red-tagging (halting) large projects for small problems.[5]

Naturally, since distributive regulation is *variable* enforcement of the law, it can work in an opposite, anti-growth, direction as well. While there is no literature on the subject, there is no question in the researcher's mind that some communities use distributive regulation as a covert means of slowing down or discouraging unwanted building. Thus, for certain citizens, inspectors fail to show up at job sites at critical times (e.g. when concrete footings are ready to be poured), while code requirements are enforced to the letter of the law and beyond, and final certificates of occupancy are delayed in "additional processing." After such treatment it doesn't take builders or contractors long to learn to avoid the community in the future.

Our contention is that distributive regulation is negatively associated with the adoption of innovations which promote public access to and through permitting processes. We suggest that once agencies have made a committment to policies which discriminate against some clients, they are highly unlikely to adopt procedural or structural changes which open up internal processes to public view or which promote easy passage through regulatory stages.

We believe, therefore, that while these agencies will reject most of the innovations identified by our dependent variables, they will particularly decline those associated with increased professionalism (such as tougher entrance requirements for inspectors and the requirements for in-service training) and those associated with facilitating the coordination and flow of plan reviews and permit records (e.g. use of development review committees, preliminary plan review meetings and computers to track permits). Professionalism and data coordination conflict with systems which value political allegiance above technical proficiency and which use confusion to mask discriminatory practices.

To operationalize our concept, we asked agency heads whether or not they believe code enforcement should vary depending upon "who the client is." Our resulting responses were surprising We believe they will help us predict the propensity of agencies to innovate

Set 2 Community Variables

This set postulates three community (socio-economic) variables as being related to building inspection agency innovation These variables are community size, measured by 1979 population estimates, growth, measured by population change between 1970 and 1977, and, competition, indicated by building official's perceptions of the level of local economic competition between builders and developers.

Political and social scientists have long been at odds as to which variables are most important in affecting public policy decisions While this conflict has not focused upon the determinants of innovation in local regulatory agencies, the overall tenor of the debate is generally applicable to our inquiry, especially as we move from political variables to socio-economic ones

For example, Salisbury suggests that the analysis of political systems and their various structural features, will not explain or predict policy decisions made by that system (Salisbury 1968). Prothro, Keach, and Dye argue in the same vein that the evidence seems "conclusive " environmental (e.g. socioeconomic) variables are more influential than political system characteristics in shaping public policies in the American states (Prothro and Keach 1968, Dye 1966). Other researchers such as Hofferbert, who examined the link in states between legislative apportionment and welfare policies and orientation (1966), and Dawson and Robinson, who investigated welfare orientations and party competition (1963), reach analogous conclusions: socioeconomic conditions are more significant in influencing policy outputs than are political variables.

While these studies have been criticized on a variety of theoretical and methodological grounds, they point to a relatively solid theoretical and empirical background upon which our present research is based for this set of variables.[6] Unlike these works, however, we are not setting out to establish whether environmental or political variables are more important in effecting public policies--evidenced by the adoption or rejection of specific innovations--but rather to establish, as a first step, the theoretical and empirical links necessary for future research on the relative impacts of each set on local regulatory agencies.

Community Size

The essence of our hypothesis here is that community size is positively associated with all types of agency innovations for medium-sized communities (e.g. those in the 25,000 - 249,999 population range) while it is negatively associated with all types of innovations for communities that are very small (e.g. below 25,000 population). Relative to very large Florida communities (e.g. those over 250,000 population), we suggest that there is a differential relationship. That is, we believe that most "administrative review" innovations that deal with agency coordination will be adopted (e.g.

use of development review committees, preliminary plan review meeting, and unified permit application forms). Similarly, we suggest that those "management" innovations which focus upon controlling employees and data (e.g. use of employee procedure manuals, computerized permit entry and recall and computer assisted inspection monitoring) will also be used by agencies in large communities. However, we believe that all other innovations will be less likely to be adopted, in comparison to medium-sized counties and cities.

We base our hypotheses on a number of empirical findings and theoretical concepts.

First, as Field and Ventre note, there is a direct link between the size of cities (and, inferentially, counties) and the size of their building inspection agencies (1971). This positive association tends to hold true for local bureaucracies in general and has important implications relative to the control of public agencies by elected officials and agency responsiveness to community service needs (Swanson and Swanson 1977).[7]

Second, while there is some evidence to the contrary, there is considerable data which suggests that as agencies get larger, they become more and more preoccupied with controlling their own employees and less concerned with the quality of outputs. As Knight notes, 'Organizations are like . . . any large mass, the larger they are the more easily they are broken into pieces, the larger *in proportion* is the amount of energy that must be consumed in merely holding them together (1964, p. 22). Although he acknowledges that the increasing size of organizations (e.g. growth) can bring benefits (e.g. enhanced economies of scale, more likelihood of survival in hostile environments, greater potential for development of new power-protecting techniques), Downs echos Knight's views and suggests three "laws" which constrain large organizations. The essence of these is that as organizations grow larger, their actions are more difficult to control and coordinate by those at the top (Downs 1967, p. 141). This is because, as March and Simon have noted, there are limits to the abilities of administrators to absorb and use information in rational decision-making (March and Simon 1958).

Third, and consequently, when organizations reach certain (unspecified) sizes, there is an increasing tendency for administrators to utilize technological means to control employee activities and coordinate data flows through ever more complex systems. In addition, since public organization size is positively correlated with community size, and since the latter is associated with increased social, economic, and political heterogeneity (e.g., Wirth's definition of "urbanism," as empirically validated by Bonjean, Browning and Carter 1969) administrators are more likely to seek out and use new techniques of client-agency coordination and negotiation in complex regulatory matters, such as construction permitting.

Thus, we suggest that large agencies will tend to use computers to keep track of employees and permits, and will also use plan and development review committees as bargaining mechanisms with builders and developers who are proposing complex projects. The likelihood of such innovations being used is also related, we believe, to the probability that large communities will have more funds at their disposal to devote to technological and managerial innovation than smaller ones. This may be due to greater permit volumes as a result of more development activity or to increasing citizen demands that systems be made more responsive to service needs. The latter was the case in the City of Tampa, where citizen pressure ultimately forced public officials to divert federal grant funds from other agencies, and direct them to "streamlining" the building inspection department and its linkage with allied regulatory agencies.

However, since large communities are often mired in antiquated and rigid civil-service regulations, and tend (because of "politically permeable" mayor-council structures) to be engrossed in unending land development and building construction infighting, which intimately involves the local regulatory bureaucracies, we expect their building agencies to exhibit much less innovation in "personnel professionalism" and "client information" access areas, than medium-sized communities. This is so, we believe, despite a 1975 study which found planning professionalism to be associated with increased population size in Florida communities (Gutekunst 1975).

Unless they are undergoing rapid and substantial growth pressure, such as those which occurred in Broward County, Florida in the late 1960's and early 1970's, we suggest that the smallest Florida communities (under 25,000 population) will tend not to have adopted any of the innovative administrative, personnel, information access, or management features we have focused upon. These communities have neither the resources nor the political demands for such changes. Their population bases and densities are not nearly so fertile in the heterogenity that produced the intense regulatory debates which characterize larger communities. And, unlike them, their smaller bureaucracies have not spawned the intricate regulatory network which makes the search for innovative procedural "short-cuts" imperative for bureaucrats who are attempting to respond to enraged citizens who have "been lost" in the system. Rather, there is a greater reliance upon a "gemeinschaft" type approach to regulatory problems, so that these are ironed out through face-to-face contacts among "neighbors." Naturally, such an approach is far more likely to breed a "distributive regulation" ethos, which actively discriminates against those who are not neighbors (e.g. outsiders) or those who do not know how the system works (e.g. newcomers).

Finally, we suspect that medium-sized Florida communities (25,000 - 249,999 population) will be the greatest adopters of innovation among our sample. Such communities tend to make more use of professionalized, council-manager forms of city government (Lineberry and Sharkansky 1971) than either larger or smaller sized communities and, more importantly, our own data shows that such communities tend to be experiencing much more dramatic population and permitting increases than the largest Florida cities. And, although they are growing slower than the smallest communities, they have a larger initial population base which, we believe, acts as a spur toward regulatory innovation since agency size and functions are sufficiently large and varied to require increased streamlining to meet rising citizen demands. Moreover, such mid-sized cities tend to allocate more resources to city bureaucracies to deal with service related problems than do smaller cities yet they are not as constrained by ossified civil service regulations as are large cities. So, when it comes to making changes, they can indeed be implemented.

In sum, we suggest that medium sized communities tend to offer a sufficiently broad base of heterogeneous interests to articulate demands for substantial innovation in building regulation and a sufficiently unified authority structure, attuned to a professional ethos, to actually adopt such innovations. We suspect this is particularly true during periods of intense community growth, the subject of our next section.

Growth

Relative to this variable, we contend that rapid and sustained community population growth has a dramatic impact on the level of innovation within local bureaucracies. This is particularly true, we suggest, for those agencies which regulate the ensuing physical development designed to accommodate a burgeoning population.

We base this contention upon Down's theory of the "performance gap," and its effect upon the search for innovation (Downs 1967, p. 169), upon Sharkansky (1975) and Thompson's (1969) conceptions of the relationship between routine and innovativeness, upon the notion of "distress innovation," as a response by an organization to a threatening environmental circumstance (Knight 1967, p. 485), and upon the idea that once growth, as a threat, has been overcome by the organization, it will be seen as a 'slack' producing benefit to be encouraged through additional innovation.

Downs describes the "performance gap" as the:

> difference in utility he [an administrator] perceives between the actual and the satisfactory level of performance . . . . The larger this gap, the greater his motivation to undertake more intensive search . . . to reduce the causes of his dissatisfaction (Downs 1967, p. 169)

One of the origins of the performance gap, according to Downs, is change in a bureau's external environment. Any significant change is likely "to have some effect on its behavior" (Downs 1967, p. 192)

To a building regulatory agency, a significant change would be a dramatic increase in permit applications resulting from large scale population shifts--net migration--into a community. Growth such as this occurred throughout Florida during the 1960's and 70's, although at different rates throughout the state.

The impact of such change is to open up a performance gap not only in administrator's perceptions, but in reality as well. Thus, agencies caught in the midst of unanticipated change are simply not prepared to handle the overloads. To cope they must "cross the action threshold," pushing out of the natural inertia--the routine--which characterizes day-to-day agency functioning. This transition is a highly risky venture since it involves a great deal of uncertainty. Thus, it is normally avoided in all but the most stressful situations. But, since the environment has been transformed from a stable, "benign" state to one which is rapidly shifting and "hostile" (March and Simon 1958, p. 183), and since most building inspection officials lack basic job security, they are forced to implement "distress innovations" to handle the situation. According to Knight, such innovation is sought first through internal changes--reshuffling personnel, firing department heads, cutting costs--rather than through attempts to directly alter the outputs of the organization. However, as the distress situation deepens, the search for change to improve performance intensifies, almost to a frenzy. Because of this, Knight hypothesizes that an organization in "great distress will behave less predictably than organizations under other conditions. . . ." (Knight 1967, p. 484)

There is no question that such a situation may produce a variety of unusual changes, not all of them beneficial. For example, the researcher observed the distress innovations which took place within the City of Wilmington, Delaware's housing and building inspection department, in response to a major scandal which rocked the agency in the mid 1970's. The chief inspectors were fired and replaced by "efficiency experts" who devised extraordinary computerized reporting systems which purported to force field inspectors to precisely account for their time, thereby reducing loafing and slashing agency costs. The real result, disclosed during informal discussions with both supervisors and inspectors, was to dramatically increase the paperwork burden for everyone and decrease the amount of time inspectors spent in the neighborhoods with citizens. Thus, we theorize that in some situations distress innovations amount to self-perpetuating, counterintuitive goal displacement activities since the superficial remedy they bring to problems may only result in different, albeit evolved, distress situations and solutions in the future.[9]

It should be pointed out that the changes produced by distress conditions tend to differ from those resulting from "slack" conditions. Although we shall discuss that concept within the context of our Organizational Set variables, Knight suggests that slack conditions produce innovations which involve changes in organization products and processes rather than those aimed at reordering internal structures (1967). Thus, a typical slack produced innovation would be the agency's expenditure of funds for additional employee training or education to provide new knowledge or techniques.

Such innovations are likely to be found, we believe, in building inspection agencies within communities which have sustained relatively dramatic growth pressures (e.g. more than a 10 percent population increase each year) for a number of years. This is so because population growth is correlated with more local building and development activity, which, in turn generates higher revenues through permit fees. We suggest that as growth pressures push up agency (and thereby community) receipts, administrators will move from a distress innovation position to a slack innovation position. We do not hypothesize at what point that move will be made since there are intervening psychological variables to take into account, however, we feel that this is an inevitable progression within such agencies given continuous community growth. As the bureaucracy as a whole adjusts itself to increased revenues, period of slack innovation will give way to more "normal,' non-innovative periods. The adopted changes, however, will remain.

To conclude, we hypothesize that population growth is a significant independent variable associated with the adoption of internal structural, product and process innovations in building regulatory agencies. These innovations, brought on first by distress and then by the psychological state accompanying resource slack, are manifested in the four dependent variable sets described in this research.

Economic Competition

Economic theorists have long debated which type of market structure--competitive, oligopolistic, monopolistic--is most conducive to innovative behavior in private firms. Indeed, an evolutionary chain of researchers, Galbraith (1952), Jewkes, Sawers and Stillerman (1958), Schmookler (1969), and Mansfield (1963), have pondered the relative advantages of greater versus lesser competition in increasing innovativeness. While we do not pretend to settle this dispute, we do suggest that, for public building regulatory organizations, increased competition within their jurisdictional environments results in a much reduced tendency to adopt innovations.

Our reasoning goes like this: while building regulatory organizations rarely "compete" with other agencies (e.g., city versus county building departments), their clients are often highly competitive among themselves, especially in Florida. This competition may be due to limited amounts of developable lands within a given community, dynamic construction financing and mortgage markets, unexpected in-migration perturbations, or a combination of all these factors.

Whatever the causes, the long-term consequence is that some local general contractors, subcontractors, building materials suppliers and professionals are either forced out of business or must move to other localities. The more immediate and mid-term impacts, however, are constrictions in the total building market, giving rise to extreme levels of uncertainty within the "task environment" (Thompson 1967) of builders, developers and allied interests.

Firms generally seek to reduce the tension and anxiety which accompany such uncertainty. As James Thompson notes, "organizations abhor uncertainty while subject to the norms of rationality" (1967, p. 99). Moreover, as organizations, public or private, encounter extreme uncertainty in one part of their task environment, they will tend to seek more control over remaining elements in the environment.

In period of high competition, we contend that the construction industry tends to focus its attention upon local government regulatory organs. Unlike the elusive and uncontrollable market, the regulatory system can be "pinned down," insomuch as its agents and institutions are visible and easily identifiable. They make excellent targets when all else fails. In time of general plenty and little competitive pressure, there is not much need to find scapegoats. As Field and Ventre point out, this largesse extends even to the introduction of new building technologies, normally a hotly contested economic and political issue:

> When construction is plentiful and all prosper, few will object to the introduction of new techniques. But in a depressed construction economy, local participants will seek all means of preserving local construction business to themselves (1971, p. 146).

One means of doing so is to pressure officials for restrictive codes to prevent the introduction of new construction techniques or materials (e.g. such as the use of plastic pipe for plumbing) which might benefit "outsiders" at the expense of local interests. Another means is to closely "police" permitting procedures and activities so that no one local interest is granted, legitimately or illegitimately, an "unfair" advantage.

Such was the case in Fairfax County, Virginia, during a period of intense competition between builders and developers following a slowdown in community growth in the early 1970's. Gardiner and Lyman report, relative to the potential for corruption:

> . . . a department head also sees a great willingness on the part of builders to police the inspectors. "If one of my men solicited a payoff or let a builder get away with something, you can be sure that other builders will be calling me." (1978, p. 55)

Under such intense scrutiny, within environments that are many times more uncertain than "normal," we would expect building officials to be extremely reluctant to introduce permitting process or structure changes, although some minor distress innovations may be made (e.g. firing a department head). Essentially, we suggest that agencies will become far more conservative in all operational aspects.

Some of this conservatism might also be attributed to a policy and procedure "stalemate," resulting from the attention directed at the regulatory agency from all sides. This situation may be akin to that described by Crain, Katz, and Rosenthal in their study of community decisions to implement water fluoridation (1969). They argued that higher education levels are associated with increased political participation for certain issues, which in turn is correlated with higher community conflict, producing stalemate and low levels of innovation on these issues.

In the same sense, high levels of economic competition increase interest in and information about the activities of building regulatory activities. However, since the building community is naturally fragmented, diverse and conflictual, higher levels of interest and information will only serve to exacerbate differences. Consequently, proposals and negotiations for innovative changes within permitting processes will be hopelessly bogged down between and among competing interests. Furthermore, we suggest that the resulting clashes may even serve to move the permitting function out of the "zone of indifference" relative to the general public interest (Wilson 1973, p. 233). It is questionable, however, whether or not such attention, typified by local newspaper coverage, will push agencies and interests from stalemate positions toward innovation orientations.

In conclusion, we posit that high levels of economic competition between builders and developers, as perceived by building officials, are antithetical to the propensity of agencies to adopt innovations.

Set 3. Organizational Variables

The final set of independent variables present three subsets--leadership professional orientations, organizational slack, and organizational boundary spanning--which, we contend, are linked to the propensity of building regulatory departments to adopt innovations.

The first subset, leadership professional orientation, is operationalized by four interconnected indicators of agency professionalism. Three of these variables have to do with agency entrance or educational requirements, while one measures perceptions of inspector discretion.

The second subset, organizational slack, uses one indicator--a rating of how much agency budgets are covered by permit generated fees--to yield a measure of the organizational psychological "flexibility" suggested by many researchers as a precursor to innovative behavior.

Our third and last subset, organization boundary spanning, attempts to determine how closely building departments work with the appropriate local planning department. This link, we believe, is an indicator of the propensity of building regulatory personnel to adapt wider, more "cosmopolitan" views of their work products and processes, and more innovative approaches to their tasks.

Before we press on with a discussion of this final set of variables, we think it appropriate here to note that, although we have stressed, thus far, the impacts of political and community variables upon the decisions and behaviors of public organizations, there is a growing body of evidence which indicates that organizations generate their own policies irrespective of interest group or socio-economic pressures.

For example, Lineberry concludes from his study of municipal service distribution decisions in San Antonio, that while there was "unpatterned inequality" of service distribution, it was more the result of "bureaucratic decision rules" generated within the agencies in question then stemming from political or interest group influences (1977, p. 183). Nivola reaches a similar conclusion in his investigation of housing inspection services in Boston. He states

> in particular, the study implies that the dispensation of city services (sometimes even those most vulnerable to political pressures, such as housing inspection) may be best understood as an autonomous bureaucratic process over which exogenous actors, including local political leaders, "policy-makers," and neighborhood interest groups, wield relatively little influence. The result is a complicated, sometimes counter-intuitive, configuration of outputs which reflects, for the most part, lower-level adaptations and practices within the public service bureaucracies themselves. (Nivola 1978, p. 60) [9]

While the total picture is unclear, the point remains that public organizations may, in certain circumstances, generate internal survival based, responses to environmental pressures and thereby neutralize some environmental influences. The problem with this, if taken to the fullest extent, is that it brings us full circle, albeit unwillingly, to the politics-administration dichotomy discussed in Chapter IV. Only in this instance, the bureaucracy has assumed such an autonomy, such a level of administrative discretion so as to place it on a co-equal or better status with the "legitimate," elected policy-making bodies. Indeed, this is the situation that Riggs predicates in his "prismatic model" of bureaucratic power in underdeveloped societies (Riggs 1964). The difference is that in these nations the elected political organs have always been relatively weak in comparison to the bureaucracy. While this may not be, therefore, an appropriate analogy to the overall American experience at the national level (although some scholars would suggest it is), it may apply to some local level situations where the political apparatus is thoroughly dominated by the "new machines," the professional bureaucracy (Lowi 1967). One might speculate that this is particularly likely in those situations where the bureaucracy has a monopoly of technical knowledge in the subject area, where there are significant local economic benefits at stake, and where general public interest in the mechanics of regulation is chronically low. In short, this might describe the building regulatory process.

Thus, it is important to note that despite the fact that public agencies are undoubtedly influenced by political and community demands, there are data indicating countervailing pressures as well. Some of these arise out of the professional orientations of agency heads, our next subject.

Leadership Professional Orientation

Although, as Rourke (1969) notes, top administrators are typically more concerned with their organization's external relations than with internal administrative or managerial problems, there is little doubt that a leader can have dramatic impact upon the attitudes and behaviors of employees. Indeed, the importance of the leadership variable upon agencies' internal and external actions is attested to by a large body of theoretical and empirical studies which attempt to explain leadership impacts and predict the leadership styles which point to "effective" or "productive" agency behaviors.[10]

It is because organization leadership is so important that the initial selection of agency heads may be the most significant service-related decisions undertaken by communities. For instance, relative to the police, Wilson contends that the choice of the police administrator is the most critical way in which the political culture affects the behaviors of line police officers--patrolmen (1973) Thus, the administrator brings to the job specific orientations and attitudes which tend to be generally compatible with community political and cultural values, and which have a substantial effect upon agency operations and functions

This is the situation, we suggest, relative to the link between the professional orientation of the chief building regulatory official, and the propensity of local agencies to adopt the innovative administrative, personnel, informational, and managerial features identified by our dependent variables. We expect these orientations to be evidenced by their attitudes toward increasing agency entrance requirements and professional certification, and by their perceptions of the allowable discretion for the line employees who operate in the field--building inspectors

As pointed out in a previous chapter, the local building inspection department might be considered the public regulatory mirror of the private 'craft' form of administration described by Stinchcombe (1959). Thus, the agency is called upon to oversee a highly fragmented industry in which, typically, a general contractor assembles a group of specialized craftsmen into a synthetic organization, a task-force, for the purposes of a specific project (e.g. building a home) At the completion of the project the team disbands

Because the regulated industries are largely crafts--with no body of generalized, written knowledge, nor a set of detailed prescriptions as to how to behave" (Wilson 1973, p. 283)--and since most local inspection departments have historically drawn their employees from these industries, the resulting agencies traditionally have been reflections of the industries they regulate. Within recent years, however, and despite considerable problems in determining job qualification standards and appropriate educational requirements, there has been a steady movement toward the professionalization of building departments and their personnel. Field and Ventre suggest, in this regard:

> These trends may indicate a desire to move in the direction of a professionalized, technical class of building officials, and may also reflect a realization that regulation of today's as well as tomorrow's building technology requires a deliberate change to a fuller set of background credentials (1971, p. 141)

Although a considerable number of building officials still appear to resist this movement, many others have looked at professionalization as a way of insulating their agencies against political and economic pressures, thereby attaining some measure of autonomy from the "close supervision" such pressures bring. Furthermore, professionalism tends to enhance the opportunity for innovation within these organizations by acquainting provincial officials with the developments in the building regulatory field at regional and national levels. This squares with Sharkansky's description of the attributes of a professional cadre of administrators. They are characterized by

> . . . advanced training in their fields of specialization, an active concern to stay abreast of the latest developments, and a desire to implement the most advanced level of service that is available. (Sharkansky 1975, p. 22)

Such attributes are similarly congruent with Hall's structural and attitudinal dimensions of professionalism, summarized here as:

Structural

1. Creation of a full-time occupation
2. The establishment of a training school
3. Formation of professional association
4. Formation of an enforceable code of ethics

Attitudinal

1. The use of the professional organization as a major external reference group
2. A belief in service to the public
3. A belief in self-regulation
4. A sense of calling to the field
5. Autonomy (Hall 1969, pp. 92-104)

Although the traits suggested by the above list often bring new problems of organizational control, we suggest, nevertheless, that they are more conducive to structure and process innovations than those which characterize the "desk-class" bureaucratic orientation of more traditional building regulatory agencies (Thompson 1969). A recent study by Oster and Quigley of regulatory barriers to the diffusion of technical innovations in building codes (e.g., use of 2 X 3 inch studs instead of 2 X 4 inch studs in non-load bearing walls, the placing of studs 24 inches apart instead of 16 or 12 inches apart, etc.) tends to buttress this contention in a related context (1977).

The researchers hypothesized that the professionalism of the building department, operationalized by the education of the chief building official (in years) and the background of the chief building inspector, was positively correlated with the likelyhood that technical innovations would be permitted within their jurisdictions. Based upon sectional data, they conclude that professionalism was the most important independent variable in explaining the adoption of these innovations (Oster and Quigley 1977).

We suggest that the discretion level of line employees is an additional determinant of agency professionalism. Consequently, we have sought to assess administrator's perceptions of the amount of discretion that inspectors have in enforcing codes. We base our assumption here upon Bell's contention that higher levels of professionalism are positively associated with discretion and negatively correlated with task predictability and management control (1973). He notes

> we hypothesize that management will perceive that if they control very tightly the tasks of workers who are faced with unpredictable work situations, then the rate of efficiency will be decreased. Consequently, we expect management to encourage workers who have unpredictable jobs to utilize their discretion (p. 333).

Street-level bureaucrats, such as building and housing inspectors, police, welfare workers, and teachers toil within highly unpredictable work environments. Indeed, Lipsky states that one of the salient aspects of the street-level bureaucrat's job are that

> Work proceeds in circumstances where there exists clear physical and/or psychological threat and/or the bureaucrat's authority is regularly challenged (1976, p. 198).

Within conditions of such unpredictability, we would expect professionally oriented building officials to attribute higher levels of discretion to employees, whereas we anticipate attitudes reflecting a less discretionary, highly bureaucratic approach from leaders with nominal professional orientations.

The psychological flexibility attendent to discretion, we believe, is a necessary ingredient in the proposal of new and different solutions to public service problems by lower-level employees, while the testing and ultimate adoption of such innovations are more likely in agencies attuned to a professional ethos.

Organizational Slack

One of the most interesting concepts in organizational theory is the notion of "slack." First described by Cyert and March relative to the behavior of the private business firm, slack theory was quickly adopted by public administration scholars (1963). Victor Thompson characterizes it as a non-rational, psychological state in which there is an "excess of achievement over aspirations" (1969, p. 45). The result is a relaxed and indulgent decision-making atmosphere which, to the organization, is the counterpart of the psychological security necessary for individual creativity.

According to Downs, organizational slack--as an excess of resources--may lead to four potentially significant benefits to the organization:

> 1. Slack permits an agency to painlessly adjust to workload increases,
> 2. It reduces internal friction within the organization,
> 3. Slack encourages increased organizational flexibility and decentralization by cutting down on the need to closely coordinate activities, and,
> 4. It enhances the organization's ability to carry out 'non-programmed activities,' such as planning, research, and innovation (Downs 1967, pp. 138-139).

The overall effect of slack is to reduce organizational uncertainty. This is particularly significant for agencies such as street-level bureaucracies which operate in highly unpredictable environments. When uncertainty levels are lowered, the organization is encouraged to risk the search for new ideas.

Knight suggests that slack conditions provide particular incentives for the private company to:

> Spend heavily on research and development activities to keep on top of the new knowledge in its world in order to get a significant head start on its competition in the area of new products and processes that will keep the company successful in the future (1967, p. 485)

Although, as previously noted, public regulatory agencies are not generally competitive across jurisdictional lines (with the exception of police departments), agencies within the same jurisdiction do compete for the available resources, even though the yearly budgetary process tends to be relatively stable based upon incremental advances over previous budgets (Wildavsky 1964). For example, within communities, agency competition may center around the availability of state or federal grant funds which might be allocated for a number of needs. Such was the situation in the City of Tampa in 1977, where several bureaus vied for a special $60,000 Department of Housing and Urban Development grant to the City which was to be made available for improvements in community development activities. Competition for the funds arise among three divisions (Community Improvement, Inspectional Services, and Land Management) within the city's Department of Housing, Inspections and Community Services. It was resolved when the Division of Inspectional Services was able to convincingly demonstrate citizen demands for improvements to the existing construction permitting system. The resulting funds, coupled with the professional orientation of a new administrator, permitted the agency the slack resources needed to search for innovative changes in permitting processes.

One of the changes that resulted was a new permitting fee system which, while raising the cost of permits, increased the likelyhood that the agency would cover its operating expenses from collected revenues. This had been an extremely sensitive point for inspection bureau heads (e.g. of electrical, plumbing-gas, mechanical, and building bureaus). So long as they felt that their units "were not pulling their own weight" relative to covering operating costs they were defensive about existing procedures and overly apprehensive about untested changes which might worsen the situation. Our research team speculated that as fees increased to more adequately cover operating expenses, bureau chiefs would be more receptive to change.

On a reinspection of these agencies after a year's absence, this proved to be the case. Bureau heads were much more relaxed about agency operations in general, and seemed to be far more receptive to the introduction of new process and product (service) techniques.

The change, we believe, was due primarily to the increased psychological security--slack--permeating the entire building inspection department as a result of greatly increased agency resources. We suspect, therefore, that this phenomenon is widespread among other inspectional organizations across the state. Thus, we hypothesize that as agency fees are perceived by department heads to cover operational expenses, there will be an increased likelihood for the occurrence of organizational slack, and the related propensity for agencies to innovate.

Organization Boundary Spanning

The final independent variable within this set attempts to capture a measure of the interaction between building inspection departments and the local planning agency. We contend that the closer these organizations work together, the more likely it is that building departments will "borrow" the administrative review (e.g. coordination), personnel professionalism, information, and management features we have identified as dependent variables and which tend to be common within planning departments. These features, however, are innovations to most building regulatory agencies.

We rest this hypothesis upon communications, social interaction, and diffusion theory as they relate to the transmission of innovative concepts across organizational boundaries, and upon existing empirical findings about how local building officials tend to receive information. The framework of our resulting theory is as follows: Building regulatory agencies and planning departments share a related "policy space" (Downs 1967, p. 212). That is, on a daily basis these organizations process great quantities of data which concern the physical development of the land. And, indeed, it is a mutual policy intent of theirs to regulate the development of that land. However, building regulatory data is far more focused--disaggregated--than planning data. It describes development on a site specific basis as opposed to planning data, which tends to be concerned with the relationship of aggregations of development sites to each other and to associated land forms. Moreover, as planning has grown as a profession, it has sought to explore the linkage of physical data with social, economic, and governmental factors in order to be able to offer "comprehensive" prescriptions to policy-makers.

Building permit applications contain a wealth of physical and economic information which, when aggregated, can be of significant use to planners as they formulate such policy recommendations. Some communities, such as San Diego, California and St. Louis County, Missouri, have institutionalized organizational interfaces, or boundary-spanning, so that data collected by the building department is routinely shared with the local planning agency. While much of this takes place by computer links, a significant amount of formal and informal interpersonal contact occurs between building inspection personnel and planning staff.

In other communities, however, bureau boundary protection is so intense that little data leak across agency lines and even less person-to- person contact occurs. When this is the case, such as in Tampa prior to 1977, building departments have few opportunities to 'borrow' process or structure concepts which may be, to them, highly innovative advances. The notion of borrowing as a prime source of innovation is not new. March and Simon stressed its relationship to the communications process:

> most innovations in organizations are a result of borrowing rather than invention. The borrowing may take the form of more or less direct imitation or it may be accomplished by importing

> new persons into the organization. . . To the extent that innovation does occur through borrowing, both the rate of innovation and the type of innovation will be functions of exposure--thus of the communication structure of the organization (1958, p. 188).

Because they have traditionally been craft rather than professionally oriented, local building officials have tended to heavily rely on specific modes of communication relative to the receipt of new ideas. Ventre makes this clear in his unique study of the 'partisan uses of technical information.' He says:

> Local building officials are exceptioanl in their primary reliance on personal experience and interaction rather than documentary sources of novel technology. Exceptional because studies of technological communications--whether in the realms of medicine or agriculture and involving either physicians or farmers--report that impersonal media and documentary sources usually bring the first awareness of an innovative practice. . . Since much of its innovation proceeds without benefit of modern diffusion techniques, there may be justification for calling this aspect of the building agency "primitive." (1977, p. 208)

Although we are discussing procedural and organizational as opposed to technical innovations, we suggest that Ventre's point remains the same. This is even more critical for building inspection agencies, since their process and content decisions are inextricably intertwined. As a consequence, we suspect that social interaction across agency boundaries is even more important in the diffusion of ideas than it might be for other agencies. In addition, we anticipate that, because some inspection departments are attempting to become more cosmopolitan in orientation, they tend to adopt the processes and features of the professional agencies in which they come into contact, rather than vice versa.

Thus, we contend that building agencies which closely interact with planning departments will be more likely to adopt innovative administrative review, personnel professionalism and client information access features than agencies which rarely or never come into contact with planning organizations. Furthermore, and this distinguishes this variable from the "Leadership Professional Orientation" variable discussed previously, we expect "close interactors" to be those agencies most likely to utilize technically oriented inspection and permit management procedures (e.g. computer assisted inspection monitoring and computerized permit entry and recall), as well as coordinative administrative review systems (e.g. development review committees and preliminary plan review meetings).

Our reasoning here is based upon the increased reliance modern planning agencies have placed upon computerized operations and the need for these within building departments if vast quantities of permit data are to be effectively shared with planning staffs. Relative to reliance upon new coordinative techniques, we suggest that as the interface between building and planning is cemented, building personnel will become 'co-opted' into the participatory planning techniques which have become obligatory within pluralistic social and economic environments. Thus, building inspectors and bureau chiefs will become drawn into the proactive stance of planners--that of anticipating public dissent and trying to "head it off" before it results in stalemate or outright conflict, which has uncertain, high-risk results.

Summary

This Chapter has set out the theoretical and empirical literature upon which we base our hypotheses. Table 2 summarizes the associations we have presented and, in so doing, depicts the relationships we expect our data to reveal. A "+" or "-" denotes the direction of the anticipated relationship, a double "+" or "-" indicates the expected strength of the correlation.

Notes

1. In a somewhat related context, Clark suggests that the *extent* of government reformism, as gauged by the type of elections, form of government, and type of constituencies is a good predictor of the concentration or dispersion of community power. Thus, the structure of government may be but one of a series of related indicators of a monolithic power structure. See Terry N. Clark, 1971. "Community Structure, Decision-Making, Budget Expenditure, and Urban Renewal in 51 American Communities," In *Community Politics. A Behavioral Approach*. eds., Charles Bonjean, Terry N. Clark, and Robert Lineberry. New York: The Macmillan Company.

2. These demands are often seen as direct threats by street-level bureaucrats. For some, this is converted into a direct challenge to their authority. Lipsky notes:

   > Threat and authority seem reciprocally related for street-level bureaucrats. The greater the degree of personal or role authority, the less the threat. One might also hypothesize that the greater the threat, the less bureaucrats feel that authority is respected, and the more they feel the need to invoke it (1976, p. 199).

3. Although Gouldner studied mine workers, he makes a convincing argument that their responses to close supervision are probably typical of others who work in large, bureaucratic organizations. See Alvin W. Gouldner. 1964. *Patterns of Industrial Bureaucracy*. New York: Free Press.

4. See Gardiner and Lyman. 1978. *Decisions for Sale*.

TABLE 2
SUMMARY MATRIX

Independent Variable Sets	Dependent Variable Sets: Agency Innovations			
	Administrative Review	Personnel Professionalism	Client Information Access	Management
1 Political				
Centralization of Power	+	+	+	+
Autonomy of Decision-Making	+	+	+	+
Distributive Regulation	--	--	-	-
2 Community				
Size Large	+	-	-	+
Size Medium	+	+	+	+
Size Small	-	+	-	-
Growth	+	+	+	+
Economic Competition	-	-	+	-
3 Organizational				
Leadership Professional Orientation	+	++	+	+
Organizational Slack	+	+	+	+
Organization Boundary Spanning	+	+	+	++

5. Such conditions are not unique to Virginia. In the early to mid-1970's some cities in Broward County, Florida were entirely dependent upon building permit fees for their operating expenses. Hungry for increased growth and the resulting funds, many city leaders "jumped at the opportunity for new development and accepted essentially any proposals. . . ." Ibid., p. 90

Moreover, "Inspectors were instructed to emphasize quantity rather than quality, that is, to get the job done to meet the demand for new housing." Ibid., p. 94

6. For a perceptive critique of Dye's (1966) socio-economic-political variables data, see Ira Sharkansky. 1970. "The Political Scientist and Policy Analysis." In _Policy Analysis in Political Science_, ed., Ira Sharkansky. Chicago: Markham.

7. Swanson and Swanson point out

> As the number of these appointed officials at the managerial level grows and because their tenure is generally of a longer duration that that of elected representatives, there is a tendency for the bureaucracy to become increasingly autonomous. This dynamic raises the question of who, in the last analysis, determines the level and quality of public services and how responsive the bureaucracy is in meeting the needs of the people (1977, p. 144)

8. The general notion of "counterintuitiveness" is derived from Jay W. Forrester. 1973. "Counterintuitive Behavior of Social Systems." In _Toward Global Equilibrium: Collected papers_ eds. Denis L. Meadows and Donella H. Meadows. Cambridge, Mass.: Wright-Allen Press.

9. Mlandenka and Hill's recent study of the distribution of police services reaches a similar conclusion. See Kenneth R. Mladenka and Kim Quaile Hill, February 1978. "The Distribution of Urban Police Services." The Journal of Politics. Vol. 40. No. 1. 112-133

10. The classic work on leadership is, of course, Chester Barnard. 1938. _The Functions of the Executive_. Cambridge: Harvard University Press. Other, more recent studies include, D. Katz and R. L. Kahn. 1960. 'Leadership Practices in Relation to Productivity and Morale.' In _Group Dynamics, Research and Theory_, eds. D. Cartwright and A. Zanders. Evanston: Row Peterson. See also, F. E. Fiedler. 1967. _Theory of Leadership Effectiveness_. New York: McGraw-Hill Book Co.

CHAPTER VII
PROFILE OF THE METHODOLOGY

Introduction

The findings and conclusions of this paper culminate a three-year research venture during which several techniques were used to uncover, generate, and organize a large quantity of data about local construction regulatory systems. This Chapter outlines the research methods used throughout the phases of data gathering and analysis. Because results of this work have already been successfully applied in two Florida jurisdictions--Tampa and Sarasota County, Florida, we expect that other local officials may be interested in knowing more about the evolution of our suggestions concerning practical innovations to 'streamline' the building regulatory process. Some of our discussion, therefore, is directed toward that audience. For the most part, however, we are addressing the academic and theoretical concerns of the research questions raised in this paper.

Phase I

The first phase of this work took place during the summer, 1977, while the researcher was project director for a HUD-funded investigation of the City of Tampa's construction regulatory-development management processes. Seen as a labyrinth through which only the extremely crafty or corrupt could pass unscathed, these processes came under heavy attack by an increasingly vocal constituency of builders, developers, and citizen groups. Demands for change--for procedural "streamlining"--were converted by a newly elected mayor and certain city council members into directives to city agencies to reform the regulatory process. Overall responsibility for this task was assumed by the City's budget director, an accountant with a zealot's faith in the ability of computers to quickly resolve social-political problems. While this orientation was to prove occasionally troublesome during the course of the project, the investigators were fortunate enough to be left to their own devices for the most part.

Thus generally unhindered, the first phase of the research was directed to the compilation of a thorough documentation of all city agencies perceived to have a hand in construction regulation. To pinpoint these agencies, the researchers began with the most obvious building related bureaucracy, the Department of Housing, Inspections, and Community Service (HICS). Highly structured interviews with division directors within this 'conglomerate' organization (so termed because it contained so many distinct sub-units), tipped the research team to the trail of every city organization deemed to have a significant impact on the regulatory process. In total, 24 district departments, divisions, and bureaus were finally identified (see Figure 7).

Each of these agencies was then scheduled for in-depth investigation by teams of graduate students. Using interview instruments designed by the researcher, the teams dispersed throughout

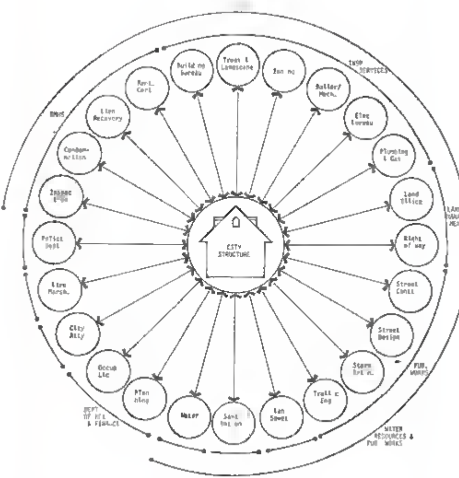
INSP SERVICES
Building Bureau
Trees & Landscape
Zoning
Boiler/ Mech.
Elec Bureau
Plumbing & Gas
LAND MANAGEMENT
Land Office
Right of way
Street Cont.
Street Design
Storm Drain.
PUB. WORKS
Traffic Eng
WATER RESOURCES & PUB WORKS
San Sewer
Sanitation
Water
Planning
DEPT OF REV & FINANCE
Occup Lic
City Atty
Fire Marsh.
Police Dept
Impact Fees
Condemnation
Lien Recovery
Rev. Cert
DBHS
CITY STRUCTURE

FIGURE 7
TAMPA MUNICIPAL AGENCIES WHICH REGULATE BUILDING

the city to gather information about agency internal organizational functions and external relationships as both pertained to building regulation As part of this inventory, the teams were directed to collect agency forms and paperwork which related to permitting The purpose here was to build a physical chain of evidence which tracked the movement of permit applications from inception to completion

The result of this field work--conducted over a three-month period--was a detailed picture of the internal operations and external relationships of all city agencies which had a meaningful participation in building regulation

This picture was presented in a series of flow charts which depicted the movement of permits through agency operations (see Figure 8). Accompanying each flow chart was a detailed narrative which summarized the process and which explained agency functions, powers, and information storage and processing procedures. Narrative and flow chart drafts were then presented to agency heads for "fine-tuning' and validation. After several iterations, each organization chief was requested to sign a "certification sheet" which specified that the final narratives and flow charts depicted, to the fullest extent possible existing agency regulatory-permitting processes (these certifications were invaluable in later project phases as change recommendations began to emerge) Immediately following presentations of the inventories, agency chiefs, staff and line personnel were asked to critique the existing systems This was done in relatively structured interview sessions (see the critique guide sheet, Appendix A) which sought information about perceived time

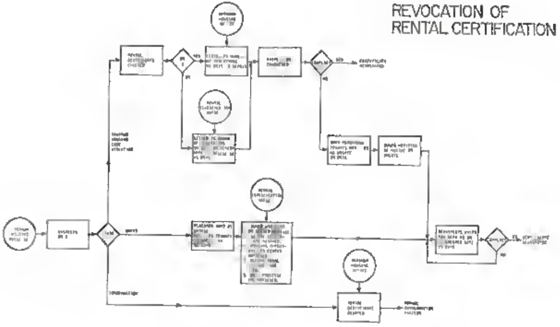
REVOCATION OF
RENTAL CERTIFICATION

FIGURE 8
TAMPA FLOWCHART EXAMPLE BUREAU OF MINIMUM HOUSING STANDARDS RENTAL CERTIFICATION

delays and bottlenecks, and which elicited responses about changes which would make internal processes (which affected clients) more effective or efficient. The critiques were compiled and analyzed for congruence with the trouble spots identified by system users. At the conclusion of this research phase, HUD and the city were presented with a report which inventoried existing regulatory-permitting practices and problems within the city. The report provided the necessary base information upon which subsequent phases were built.

Phase 2

This phase took place in the fall and winter, 1977-1978, when the researcher (as part of a joint City of Tampa-University of Florida group) traveled to eight jurisdictions around the nation to gather data from "model" construction regulatory systems. These jurisdictions--Washington, D.C., Fairfax County, Virginia, Wilmington, Delaware, Chicago, Illinois, St. Louis County, Missouri, San Diego and Los Angeles, California--were identified in the academic and professional literature as having made significant reforms and innovations in their building regulatory procedures.

During the trip to these communities the research team conducted thorough, though unstructured, interviews with local appointed and elected officials and with agency staff in order to assess the success of these changes. In some cases, notably in Wilmington, Delaware and Fairfax County, Virginia, the team discovered that the literature had greatly overstated either the extent of the innovation or its practical impact in reforming a regulatory process. However, in other situations such as presented by St. Louis County, Missouri and San Diego, California, the published reports had understated the accomplishments and impacts of regulatory reform upon the construction regulatory process.

A report of all the attempted innovations was compiled with special emphasis upon those which proved particularly successful or unsuccessful. Those innovations or reforms which seemed particularly applicable to the City of Tampa's problems were singled out for further investigation.

It should be noted that discussions on this trip tipped the researchers to other communities which had implemented other regulatory reforms. Some of these were in the researchers' own backyards (e.g. Dade County and Pinellas County, Florida), and this enabled the team to follow up with in-state visits or calls.

In addition, it seems worthy of mention that the City-University research trip helped both parties gain realistic insights into the problems and possibilities associated with the innovations which were later proposed. That is, face-to-face communication with the bureaucrats who oversaw permitting operations and with the elected officials who took political responsibility for them alerted both sides of the research team to the practical problems which accompany recommendations for change.

The end product of this phase was a list of organizational-administrative innovations which, based upon our literature reviews and field research, appeared to affect citizen access to and through regulatory and permitting procedures in local building regulatory systems Some of these innovations are the dependent variables in this research They are divided into the four types we have previously noted: administrative review, personnel professionalism, client information access, and management Our independent variables, grouped within political, community, and organizational sets, were constructed during the following research phase

Phase 3

During phase three of the research, conducted during the spring and summer, 1979, these variables were operationalized in the design of a building regulatory questionnaire (see Appendix B) The questionnaire was pretested on selected faculty in the Department of Architecture, School of Building Construction and Department of Urban and Regional Planning at the University of Florida s College of Architecture. Also participating in the pretests were building officials from the cities of Gainesville and Tampa, Florida The questionnaire was additionally pretested on several building products' representatives who work closely with local building officials. Following the pretests revisions were made and the questionnaire was mailed to 218 county and municipal building inspection departments in Florida This represents 47 percent of the 463 building inspection agencies in the state. Complete responses were collected for 136 agencies across the state, representing a 29 3 percent sample of the total agency population. The map in Figure 9 illustrates the distribution of responses across the state More than 62 percent of the initial sample returned a completed questionnaire Non-respondents were sampled by telephone

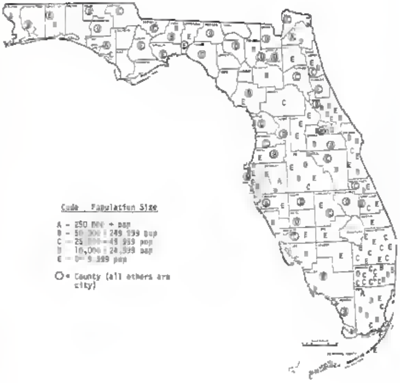
Code   Population Size
A – 250,000 + pop
B – 50,000 – 249,999 pop
C – 25,000 – 49,999 pop
D – 10,000 – 24,999 pop
E – 0 – 9,999 pop
○ = County (all others are city)

FIGURE 9
DISTRIBUTION OF SURVEY RESPONSE

to determine whether or not there was any systematic bias in the questionnaire. It was determined there was not.

In order to make sure that all types of cities were surveyed, the sample was stratified into five classes of municipalities with random selection within each strata. The classes were:

1. Major Urban Core City (250,000+ population)
2. Minor Urban Core City (50,000 - 249,000 population)
3. Independent City (25,000 - 49,999 population)
4. Small City (10,000 - 24,999 population)
5. Small Town (0 - 9,999 population) [1]

All counties were included since their number--66--was determined to be within cost and time constraints. Counties were classified as either urban or non-urban depending upon population. Urban counties were those which contained 50,000 or more population.

The results of the questionnaire, which gathered data on administration, personnel, code enforcement, management practices, client/customer information access, and community characteristics were mailed back to participating local building officials during the fall and winter, 1979-1980. Additional community characteristics data were collected from secondary sources. Each data category was linked to a set of dependent or independent variables.

Data analysis was performed using Statistical Package for the Social Sciences (SPSS) computer programs.

Summary

The data reported in this paper was generated in three phases during 1977-1980 using a variety of research techniques: literature reviews, structured and unstructured field interviews and surveys, and computer analyses. Each of these methodologies yielded valuable information which helped develop the next research stage. The following Chapter sets out the findings of our third, and final, research phase.

Notes

1. This taxonomy was adapted from that used by Rossmiller, Hale, and Frohreich in a study of educational finance. See Richard A. Rossmiller, James A. Hale, and Lloyd E. Frohreich, 1970. Fiscal Capacity and Educational Finance. Madison, Wisc. University of Wisconsin.

CHAPTER VIII

FINDINGS

Introduction

This section presents the data gathered during the third phase of our research and analyzes it vis-a-vis the propositions presented in Chapter I.

To set the stage for this, we begin with a brief recap of our general research orientation and questions. Next, we provide a summary of the questionnaire response, describing the communities and agencies which contributed the information to these findings.

Following this our empirical evidence is presented for each set of dependent and independent variables. We briefly discuss our initial hypotheses and the theoretical linkages set forth in Chapter VI in light of the statistical associations uncovered between the variable sets. This discussion forms the basis for the broader-based conclusions presented in Chapter IX.

Research Orientations: Recap

As noted at the beginning of this paper, our general intent in this research is to understand how and why building regulatory agencies differ in their treatment of clients--citizens seeking permits--

and document those differences. Specifically, we suggested that these differences might be made apparent by the propensity of Florida's local building inspection departments to adopt certain innovations which tend to effect access to and passage through local regulatory processes. Those processes can be extraordinarily cumbersome and thereby pose, for certain classes of clients, extreme difficulties. For example, the small builder, developer or contractor who is not "hooked into" local economic or political networks may be at an extreme disadvantage in relation to other larger or more favored users. Likewise, out-of-town users may face problems with unfamiliar and complicated regulatory requirements which are not explained by either permitting personnel or information materials. Moreover, all citizens may find themselves mysteriously "lost" in the regulatory bureaucracy for periods with virtually no recourse to obvious administrative remedies.

Whether or not agencies opt to avail themselves of certain administrative, personnel, informational or managerial innovations to mitigate these problems tends to be related, we have suggested, to sets of political, community, and organizational factors which operate upon (and within) each organization. We suspect that these independent variables help determine the orientation of regulatory agencies to citizen needs.

To better understand the relationships involved, we now turn to our findings. First, we will discuss the communities whose agencies responded to our survey instrument and then we will direct our focus to the agencies themselves.

Survey Response. The Communities

Type and Size

Almost 30 percent of the state s local building inspection departments returned completed questionnaires. Tables 3 and 4 depict the type and size of cities and counties in which our sample respondents are located.

Our sample yields a generally representative mix of large and small population centers, with contributors from every SMSA in the state and from every geographic region As Tables 5 and 6 demonstrate, with the exception of incorporated cities under 9,999 population, we were able to obtain a generally high percentage of responses for both cities and counties within every size category. It should be noted that more than half (180) of the jurisdictions in the "9,999 and below" city population size category are communities of 2,500 or less population These small cities often turn over building inspection responsibilities (as well as other municipal functions) to county government We suspect, therefore, that many of these cities are subsumed within county response categories

Regional Planning Council Area

The widespread geographic distribution is evident when responses are plotted against the state s eleven regional planning councils While boundaries are somewhat arbitrary, the counties represented by these councils are generally "grouped together on the basis of common interests and needs for planning development"

TABLE 3
CITY CONTRIBUTORS BY TYPE AND SIZE

Type of City	Size	Number of Responses
Major urban core	250,000 +	2
Minor urban core	50,000 - 249,999	12
Independent city	25,000 - 49,999	22
Small city	10,000 - 24,999	29
Small town	9,999 & below	26
Total cities		91

TABLE 4
COUNTY CONTRIBUTORS BY TYPE AND SIZE

Type of County	Size	Number of Responses
Urban	250,000 +	3
Urban	50,000 - 249,999	11
Rural	25,000 - 49,999	10
Rural	10,000 - 24,999	13
Rural	9,999 & below	8
Total counties		45

TABLE 5
COMPARISON OF CITY RESPONSES WITHIN POPULATION SIZE CATEGORIES TO ACTUAL CITY FREQUENCIES WITHIN CATEGORIES

Size	Actual Number of Cities Within Category	Number of Respondents Within Category	Percent Respondents of Actual Number
260,000+	3	2	66.6
50,000 - 249,999	15	12	80.0
25,000 - 49,999	28	22	78.5
10,000 - 24,999	45	29	64.4
9,999 & below	298	26	8.7
Total	389	91	

TABLE 6
COMPARISON OF COUNTY RESPONSES WITHIN POPULATION SIZE CATEGORIES TO ACTUAL COUNTY FREQUENCIES WITHIN CATEGORIES

Size	Actual Number of Counties Within Category	Number of Respondents Within Category	Percent Respondents of Actual Number
250,000+	8	3	37.5
50,000 - 249,999	21	11	52.3
25,000 - 49,999	10	10	100.0
10,000 - 24,999	17	13	76.4
9,999 & below	10	8	80.0
Total	66	45	

(Thompson 1979, p. 2). Table 7 shows response distribution for planning council areas.

It should be noted that the density of response generally corresponds to the density of urban settlement around the state. Thus, response rates tend to be higher for those parts of Florida with greater numbers of incorporated cities.

Age

Initially, it was thought that a community's age might have some bearing upon the likelihood that its bureaucracies would be more or less receptive to new ideas--innovations. However, this notion was discarded when it became evident that community age was not necessarily related to the age of the regulatory agency and that the latter information was probably more germane. Unfortunately, agency age information was not generally available. Not surprisingly, most of the communities (97) whose building departments responded to the survey were established after 1900. The age breakdown for all responding jurisdictions is depicted in Table 8.

Population Change

Reflecting trends in Florida and other Sunbelt states, the great majority of the communities with responding agencies had experienced population increases between 1970 and 1977. Only seven cities and counties in our sample had population decreases in that period while 129 grew. Even though there are significant differences in the rate of increase reported, the mean population increase for our entire sample is 57.20 percent. This figure is skewed, however, by

TABLE 7
RESPONDENTS BY REGIONAL PLANNING COUNCIL AREA

Regional Planning Council (RPC)	Planning District	Number of Responses
West Florida RPC	1	4
Apalachee RPC	2	11
North Central Florida RPC	3	7
Northeast Florida RPC	4	9
Withlacoochee RPC	5	7
East Central Florida RPC	6	24
Central Florida RPC	7	10
Tampa Bay RPC	8	16
Southwest Florida RPC	9	8
Treasure Coast RPC	10	17
South Florida RPC	11	24
Total		136

TABLE 8
COMMUNITY AGE

Date Established	Absolute Frequency	Percent Relative Frequency
1800 - 1850	15	11.0
1851 - 1900	24	17.8
1901 - 1915	27	19.9
1916 - 1925	35	25.7
1926 - 1940	8	5.9
1940 - present	27	19.7
Total	136	100.0

the relatively small number of communities (16) which report very large population increases, of over 100 percent. Distribution of population change among our respondents is depicted in Table 9.

Linked to population increases among the communities surveyed are average increases in building permits issued during the same seven-year period. When single-family residential permits and multi-family residential permits are compared for 1970 and 1977, the mean increase for 94 jurisdictions for which data is available and comparable, is 190 percent. However, like the population figures, this number is skewed by a small number of communities which registered extraordinary permit gains. It should be noted that, in fact, our data revealed more communities (54) which had diminished permit activity as opposed to those with increased permitting (41). Important too, is the fact that obtaining a permit does not necessarily mean that a structure will be built. It is only an indicator of possible future building activity. Thus, a "hard start," or the initiation of construction itself, is the key indicator of real building activity. Unfortunately, hard start data is not generally aggregated by building inspection departments since the initial permit fee covers agency expenses for all subsequent agency involvement such as field inspections. Thus, during some years of financial optimism or speculation, many building permits can be "pulled" in any given community without any real construction actually taking place (the permit data is recorded monthly by each issuing agency and breakdowns are sent to the U.S. Department of Commerce, Bureau of the Census)

TABLE 9
RATES OF POPULATION CHANGE 1970 - 1977

Percent Population Change	Absolute Frequency	Percent Relative Frequency
Less than 0 (-1 to -13)	7	5.1
0 to 9	20	14.7
10 to 19	19	14.0
20 to 29	18	13.2
30 to 39	16	11.8
40 to 49	16	11.8
50 to 59	5	3.7
60 to 69	6	4.4
70 to 79	7	5.1
80 to 89	4	2.9
90 to 99	2	1.5
More than 100 (100 - 950)	16	11.8
Total	136	100.0

Taken together, then, permit and population data such as that presented here seems to indicate that although the communities represented in our sample have had a real increase in population overall, it is unclear whether this increase was mostly absorbed into the existing housing stock left over from the 1973-75 construction bust, or whether new construction was initiated to pace the population growth. What is clear is that a relatively small number of communities (32) experienced an explosive permitting rate (e.g. over a 50% increase in single and multi-family residential permits between 1970 and 1977) and this tends to inflate the mean. Indeed, if one checks the median figure for permitting, this problem becomes evident. The median reports permitting activity for the sample at -20.5 percent for the period in question.

Finally, it should be noted that, because Florida growth rates have been generally high throughout the past two decades, even a decrease in the percent of permits issued in 1977 (compared to 1970 data) still presents many community agencies with a formidable permitting workload.

Type of Local Government

Local government type for cities is shown in Table 10. This data was not tabulated for counties. We asked mayor-council respondents to specify whether theirs was a "weak" or "strong" type of system. Of the 17 who answered, ten identified their community's government structure as a strong mayor type, whereas seven specified a weak mayor system.

TABLE 10
TYPE OF LOCAL GOVERNMENT: CITY

Type	Absolute Frequency	Percent Relative Frequency
Manager	70	76.9
Mayor Council	20	21.9
Commission	1	1.2
Total	91	100.0

Pro-Growth/No Growth

To get an idea of local attitudes toward building and development, we sought to assess building officials' perceptions about community growth stances. In response to the question, "How would you classify your community?', the responses are shown in Table 11

The great majority of building officials perceive their communities as being in favor of planned building and development, or at the very least, having a push-pull balance relative to growth pressures. It is interesting to note the distribution of the 'pro-growth perceivers." Four are from small and very rural Florida panhandle counties and cities. Because of economic reasons, this area has been an historic citadel of pro-growth sentiment in Florida.[1] Of the others, three come from Florida 'Gold Coast" cities which have experienced extremely high rates of growth over the past decade, while the remaining pro-growth perceiver is, likewise, from a high growth-rate area but is located in a west coast county.

City-County Land Development Competition

On generally the same dimension, we were interested in knowing how intense city and county land development competition was as judged by the local building official. In some cases, the intensity of this type of competition may give the researcher a clue as to where to look for reform, as each jurisdiction may try to outdo the other in offering a hospitable regulatory climate to builders and developers. On the aggregate, As Table 12 shows, we found a low intensity rating of city-county land development competition

TABLE 11
PRO-GROWTH/NO GROWTH

Response Category	Absolute Frequency	Percent Relative Frequency
Pro-growth (for increased land development at all costs)	8	5.9
No-growth (against increased land development at all costs)	1	.7
Planned growth (for carefully considered growth)	84	61.8
Mixed growth pressures	39	28.7
Can't judge at all	2	1.5
No answer	2	1.5
Total	136	100.0

TABLE 12
CITY-COUNTY LAND DEVELOPMENT COMPETITION

Response Category	Absolute Frequency	Percent Relative Frequency
Very competitive	9	6.6
Moderately competitive	32	23.5
Little competition	53	39.0
No competition	39	28.7
No answer	3	2.2
Total	136	100.0

Thus, most building officials feel there is little or no land development competition between the city or county. When the data is sorted by population size, we find that building chiefs in smaller to medium size communities (e.g. 10,000 - 245,000 population) tend to be more likely to perceive extreme or moderate city-county land development competition than those of either the very biggest or very smallest communities. Table 13 illustrates that finding.

Economic Competition Among Local Builders and Developers

In contrast to the generally low-level of acknowledged city-county land development competition, our data reveal a striking perception of significant economic competition among participants in the local markets. This rating, one of our key independent variables, reinforces the general notion that the local building industry typifies the "dog-eat-dog" competition of idealized (or vilified) free enterprise. Thus, building officials judged economic rivalry among local builders and developers as shown in Table 14.

When sorted by population size, we also find a reverse of city-county land development competition reports. As we would expect, economic competition is seen as greatest in larger, Florida communities and generally less intense in the smaller ones. Our data reveals the distribution shown in Table 15.

This pattern is further borne out when we sort perceived economic competition by regional planning council area. The most urbanized regional planning council areas top the list relative to reported rivalry between local builders and developers. As Table

TABLE 13
CITY-COUNTY LAND DEVELOPMENT COMPETITION BY POPULATION SIZE CATEGORY

Response Category	Percent Rating Competition Within Population Size Categories				
	250,000 +	50,000 - 249,999	25,000 - 49,999	10,000 - 24,999	9,999 & below
Very Competitive	20	4.3	12.5	2.3	5.8
Moderately Competitive		39.1	18.7	30.9	11.7
Low Competition	40	26	37.5	35.7	52.9
Can't Judge	40	30	21.8	30.9	29.4
No Answer			9.3		

TABLE 14
ECONOMIC COMPETITION BETWEEN LOCAL BUILDERS AND DEVELOPERS

Response Category	Absolute Frequency	Percent Relative Frequency
Highly competitive	41	30.1
Moderately competition	67	49.3
Low competition	14	10.3
Can't judge	13	9.6
No answer	1	.7
Total	136	100.0

TABLE 15
LOCAL ECONOMIC COMPETITION SORTED BY COMMUNITY SIZE

	Percent Rating Competition Within Population Size Categories				
Response	250,000 +	50,000 - 249,999	25,000 - 49,999	10,000 - 24,999	9,999 & Below
Highly competitive	40	69	31	21	11
Moderately competitive	20	17	43	69	55
Low competition	20	0	12 5	4	20
Can't judge	20	13	9	4	11
No answer	0	0	3	0	0

16 shows, if we rank economic competition, based upon the sum of those identifying their community as "highly competitive" or "moderately competitive," we find that the highly urbanized South Florida Regional Planning Council Area (Dade, Broward, and Monroe Counties) tops the list, followed closely by Tampa Bay Regional Planning Council Area (Hillsborough, Manatee, Pasco, and Pinellas Counties), and then by the East Central Regional Planning Council Area (Brevard, Lake, Orange, Osceola, and Seminole Counties) The Regional Planning Council Area with the least identified competition between local builders and developers is Planning District 5, managed by the Withlacoochie Regional Planning Council (Citrus, Hernando, Levy, Marion, and Sumter Counties)

Agency Characteristics

Thus far, we have discussed some of the socio-economic political and demographic characteristics which describe the communities in which our respondent agencies are located. We now look at the agencies themselves

Size

Agency size is best gauged by the number of building inspectors Table 17 shows that the vast majority of agencies represented have ten or fewer inspectors.

Agency size is linked to community size. Thus, the larger, urban cities and counties in our sample contributed those agencies with 20 or more inspectors. The mean number of inspectors for each

TABLE 16
LOCAL ECONOMIC COMPETITION SORTED BY REGIONAL PLANNING COUNCIL AREA (RPCA)

RPCA and Planning District Number	Highly Competitive	Moderately Competitive	Low Competition	Can't Judge	Competitive Rank
West Florida 1	2* (50.0%)	1 (25.0%)		1 (25.0%)	6 (tie)
Apalachee 2	2 (18.1%)	5 (45.5%)	4 (36.3%)		9
North Central Florida 3	2 (28.5%)	4 (57.1%)	1 (14.2%)		5
Northeast Florida 4	7 (77.7%)	1 (11.1%)		1 (11.1%)	4
Withlacoochee 5	1 (16.6%)	1 (16.6%)	2 (33.3%)	2 (33.3%)	10
East Central Florida 6	10 (41.7%)	12 (50.0%)	2 (8.3%)		3
Central Florida 7	3 (30.0%)	4 (40.0%)	3 (30.0%)		7
Tampa Bay 8	8 (53.3%)	6 (40.0%)	1 (6.6%)		2
Southwest Florida 9	2 (25.0%)	4 (50.0%)		2 (25.0%)	6 (tie)
Treasure Coast 10	2 (11.7%)	9 (52.9%)	3 (17.6%)	3 (17.6%)	8
South Florida 11	13 (56.5)	9 (39.0%)		1 (4.3%)	1

* This number represents the absolute frequency of answers to the question, while the number in parenthesis represents the relative frequency (percent) of those answering the question.

TABLE 17
NUMBER OF BUILDING INSPECTORS PER AGENCY

Number of Inspectors	Number of Agencies	Percent Relative Frequency
1 - 5	104	76.5
6 - 10	14	10.2
11 - 15	11	8.0
16 - 20	2	1.4
21 +	4	2.9
Missing	1	.7
Total	136	100.0

population size category is depicted in Table 1, page 55. Another measure of agency size is the number of permit clerks. Table 18 depicts that data.

Agency Functions

Indicators of the diversity of responsibilities of local building inspection departments in Florida are the number and range of functions performed by these agencies. Our data revealed that these organizations perform, on the average, 17.8 different functions, not all having to do with overseeing the structural integrity of buildings. Three agencies reported as many as 29 different functions, while two organizations reported as few as five. A listing of the type of functions performed is shown in Table 19.

It should be borne in mind that any or all of the above duties may be performed in addition to the standard building regulatory functions of the agency--e.g. permitting basic structural, electrical, mechanical, and plumbing systems.

One of the functions which tends to give local inspection departments power over the actors in their task environment is the ability to revoke contractor or sub-contractor occupational licenses. Most Florida agencies do not have this power, as shown by Table 20.

As might be expected, when these responses are sorted by population size, we find that, with the exception of the population centers in the 50,000 - 249,999 category, smaller communities are less apt to empower local regulatory agencies to oversee contractor licensing. In addition, as Table 21 shows, the very biggest cities

TABLE 16
NUMBER OF PERMIT CLERKS PER AGENCY

Number of Clerks	Number of Agencies	Percent Relative Frequency
1	54	39.7
2	38	27.9
3	16	11.8
4	11	8.1
5	4	2.9
7	1	0.7
8	1	0.7
9	1	0.7
Missing	10	7.4
Total	136	100.0

TABLE 19
TYPE OF AGENCY FUNCTIONS

Agency Functions Reported
* Landscape reviews
* Site plan reviews
* Process zoning applications
* Perform zoning enforcement inspections
* Enforce minimum housing standards
* Perform fire safety inspections
* Issue occupational licenses
* Land use planning duties
* Contractor and sub-contractor licensing
* Issue building moving permits
* Issue sign permits
* Issue swimming pool permits
* Issue noise control permits
* Issue mining permits
* Issue beach permits
* Issue curb cut permits
* Issue trailer/mobile home permits
* Perform subdivision reviews
* Animal control duties
* Wrecking/demolition permits
* Temporary office warehouse permits
* Perform lighting efficiency inspections
* Perform lot upgrading inspections
* Boathouse and dock permits
* Parking lot permits
* Sprinkler permits
* Community development duties
* Park inspections
* Flood plain approvals

TABLE 20
POWER TO REVOKE CONTRACTOR LICENSES

Response	Absolute Frequency	Percent Relative Frequency
Yes	58	42.6
No	78	57.4
Total	136	100.0

TABLE 21
POWER TO REVOKE CONTRACTOR LICENSES BY POPULATION SIZE CATEGORY

Population Size	Percent Response, Power to Revoke Yes	No
250,000+	40	60
50,000 - 249,999	52	48
25,000 - 49,999	43	56
10,000 - 24,999	42	57
9,999 & below	35	64

and counties (e.g. 250,000+ population) join with the smaller ones in their reluctance to give agencies the power to revoke contractor licenses. It may be that in the most populated and politically heterogeneous urban areas, local trade unions have sufficient political clout to successfully deter local agency control. In line with this we find, when the data is further grouped by regional planning council area, that Tampa Bay, South Florida and East Central Florida (Orlando) planning council districts exhibit the greatest "resistance" to allowing local building agencies the power to regulate contractors and subcontractors, whereas districts containing predominately mid-sized communities such as those regulated by the Southwest Florida and Treasure Coast Regional Planning Councils, tend to permit building departments to oversee licensing.

Permit Processing

One of the major complaints of users of the building regulatory system in Tampa was that obtaining permits required several trips to widely dispersed city (and county) agencies over a period of days. Spatial and temporal fragmentation of the process was inconvenient and frustrating to citizens. Indeed, as a review of the available literature subsequently revealed, calls for "one-stop permitting systems" were widespread across the nation, particularly among development interests and groups. The problem was (and is) that no one has been able to define much less operationalize a "one-stop" system, since the permitting process, especially for relatively elaborate construction, is inherently and necessarily complex. We were curious, however, about the extent to which agencies in Florida had centralized permitting in one place and had condensed for simple, one- and two-family residential construction, the dispensing of permit forms into a "one-time" operation. Tables 22 and 23 shows the results of our inquiries

We were surprised by the large majority of agencies reporting centralized geographic locales for permitting. As Table 24 illustrates, with the exception of communities of 50,000 - 249,999, this centralization correlates with size--the smaller the jurisdiction, the more likely all permitting takes place at one location. One explanation for the deviation of the 50,000 - 249,999 class communities, which tend to report more centralized permitting than any of the others, may be that these communities are somewhat younger, with most having been established after 1901. Consequently, their governments may have been more oriented to the "efficiency" and "scientific management" principles that accompanied local government reform (Taylor 1911). Centralizing the administration apparatus might have been one outgrowth of this.

While there is a much more even split relative to the responses on temporal consolidation, the same population size correlation is found in the data. In general, as Table 25 demonstrates, as communities grow larger, they are less likely to report that all permits can be obtained at one time. Particular standouts are communities in the 25,000 - 49,999 population size category, whose agencies report it much less likely that one can obtain all permits at one time. This somewhat baffling occurrance is not explained by significant differences

TABLE 22
PERMITTING PROCESS: ONE PLACE

Response	Absolute Frequency	Percent Relative Frequency
Yes	111	85.4
No	19	14.0
No answer	6	4.4
Total	136	100.0

TABLE 23
PERMITTING PROCESS: ONE TIME

Response	Absolute Frequency	Percent Relative Frequency
Yes	68	50.0
No	61	44.9
No answer	7	5.1
Total	136	100.0

TABLE 24
PERMITTING CENTRALIZED AT ONE LOCATION BY POPULATION SIZE CATEGORY

	Percent Response Permits All Obtained at One Location		
Population Size	Yes	No	No Answer
250,000+	60.0	40.0	
50,000 - 249,999	91.3	8.6	
25,000 - 49,999	78.1	20.8	
10,000 - 24,999	80.9	11.8	7.1
9,999 & below	82.3	8.8	8.8

TABLE 25
PERMITTING TIME CONSOLIDATED BY POPULATION SIZE CATEGORY

	Percent Response Permits All Obtained at One Time		
Population Size	Yes	No	No Answer
250,000+	40.0	60.0	
50,000 - 249,999	47.8	52.1	
25,000 - 49,999	34.4	62.5	
10,000 - 24,999	54.8	38.1	7.1
9,999 & below	61.7	29.4	8.8

in community age, expenditures, population change, or changes in permitting activity

Personnel: Standards, Salaries, Job Protection

Although, as Table 26 depicts, a few agencies still have no formal minimal entrance requirements for building inspection personnel. The great majority of Florida's local departments do have these standards. Without exception the agencies reporting no formal entrance requirements or standards are located in small, rural communities.

When queried as to the type of inspector entrance requirements a slight majority of respondents (50.7 percent) said that the agency had only one criteria, which usually involved meeting the inspector qualification standards set out by the Standard Building Code, Florida's most widely used code. A sizeable minority of respondents (34.5 percent) indicated that their agencies had two or more alternative entrance requirements, most frequently involving a mix of formal education and construction experience. Only four agencies (2.9 percent) stated that college work was a prerequisite to entry. Because of numerous scandals in the mid-1970's, potential Broward County inspectors are required to be certified according to rules set forth by the county's Board of Rules and Appeals, a unique circumstance in Florida. In Boca Raton and West Palm Beach (Palm Beach County) inspectors must obtain Building Officials Association of Florida (BOAF) certification after one year's employment.[2]

Because there is no time-series data on Florida it is not clear whether or not the state is keeping pace with the national trend,

TABLE 26
AGENCY ENTRANCE REQUIREMENTS

Response	Absolute Frequency	Percent Relative Frequency
Have no formal requirements	4	2.9
Have formal requirements	116	85.3
No answer	16	11.8
Total	136	100.0

reported by Field and Ventre, of "moving away from single qualification criteria toward multiple criteria" (Field and Ventre 1971, p. 141). However, judging by the open-ended comments of building officials on our survey instrument, the impression is that many agencies have taken giant strides, particularly as related to acceptance of formal education in tandem with certain types of construction experience.

However, the generally low level of professional education found throughout the state's building departments is evidenced by the identification of those performing in-house plan reviews. Table 27 shows the results when we asked officials to identify who did plan examinations in their agencies.

The findings here contrast with our discovery that many California counties require plan reviews to be performed by registered architects or engineers.

That building inspectors rank relatively low among municipal or county workers is evidenced by their salary scales and job protection.[3] The average annual salary reported by our respondents was $12,333, with the lowest salary $1,200 (for part-time work) and the highest $23,379, paid in Broward County. It is interesting to note that officials of two very small agencies said that inspectors were paid directly out of fees generated by building permits.

Most building officials, inspectors, and permit clerks in Florida have little or no job protection through civil service or unionization. Table 28 depicts our findings relative to this situation.

TABLE 27
AGENCY PLAN REVIEWERS

Reviewers	Absolute Frequency	Percent Relative Frequency
Registered architects/engineers	24	17.6
Class A general contractors	25	18.4
Employees other than above	86	63.2
No answer	1	0.7
Total	136	100.0

TABLE 28
CIVIL SERVICE OR UNION JOB PROTECTION

Response Category: Employee	Absolute Frequency	Percent Relative Frequency
Chief building official		
Civil service	23	16.9
Union	0	0.0
Neither	101	74.3
No answer	12	8.8
Building Inspectors		
Civil service	31	22.8
Union	8	5.9
Neither	75	55.1
Both	8	5.9
No answer	14	10.3
Permit Clerks		
Civil service	37	27.2
Union	7	5.1
Neither	71	52.5
Both	7	5.1
No answer	14	10.3
Total	136	100.0

Naturally, this makes these individuals far more sensitive to political pressures than might ordinarily be the case.

Political Pressures

In light of the above findings it is interesting to note the extent to which political pressure is identified as a problem by building officials, and to pinpoint those most likely to exert it. We asked respondents to rate how seriously political pressure interferred with their agency's ability to carry out its goals. Table 29 shows the rather surprising results.

Despite their apparent susceptibility to such pressures, the vast majority of building officials feel that political pressures do not hinder their agencies' abilities to fulfill their missions. Indeed, two respondents noted that political pressures helped them carry out goals. It should be noted that this finding contradicts other data we have obtained from rank and file department personnel in several city and county agencies. These individuals seem to be far more likely to identify political pressures as being an interference in everyday operations.

When asked to identify and rank the classes of individuals most likely to exert political pressures, we obtained the results contained in Table 30. From the Table, we find that building officials pinpoint homeowners by far as the most intense users of political pressure. Although "elected officials" edge out "developers/builders" for second place, the margin between them is relatively slim. The fact that both are so closely perceived as purveyors of political pressure may be

TABLE 29
RATING INTERFERENCE OF POLITICAL PRESSURES

Response: Seriousness of Interference	Absolute Frequency	Percent Relative Frequency
Very seriously	4	2.9
Moderately seriously	14	10.3
Not very seriously	48	35.3
Not at all	56	41.2
Help agency achieve goals	2	1.5
Other	1	0.7
No answer	11	8.1
Total	136	100.0

TABLE 30
IDENTITY AND RANK OF THOSE EXERTING POLITICAL PRESSURES

	Most Pressure		Ranking				Least Pressure	Identified but not ranked	No answer	Total
	1	2	3	4	5	6	7			
Local building materials manufacturers/suppliers		3* (2.2%)	1 (0.7%)					2 (1.5%)	130 (95.6%)	136 (100.0%)
Out of town building materials manufacturers/suppliers	3 (2.2%)	1 (0.7%)	1 (0.7%)						131 (96.3%)	136 (100.0%)
Local trade associations		1 (0.7%)	2 (1.5%)		1 (0.7%)			3 (2.2%)	127 (93.4%)	136 (100.0%)
National trade associations	1 (0.7%)		2 (1.5%)						133 (97.8%)	136 (100.0%)
General contractors	3 (2.2%)	6 (4.4%)	8 (5.9%)	1 (0.7%)	1 (0.7%)			6 (4.4%)	111 (81.6%)	136 (100.0%)
Subcontractors	1 (0.7%)	2 (1.5%)	2 (1.5%)	1 (0.7%)	1 (0.7%)	1 (0.7%)		2 (1.5%)	126 (92.6%)	136 (100.0%)
Architects	5 (3.7%)	4 (2.9%)		2 (1.5%)	1 (0.7%)			7 (5.1%)	117 (86.0%)	136 (100.0%)
Engineers	1 (0.7%)	3 (2.2%)		2 (1.5%)		1 (0.7%)		3 (2.2%)	126 (92.6%)	136 (100.0%)
Homeowners/"do-it yourselfers"	19 (14.0%)	5 (3.7%)	4 (2.9%)	1 (0.7%)	1 (0.7%)			27 (19.9%)	79 (58.1%)	136 (100.0%)
Developers/builders	8 (5.9%)	6 (4.4%)	2 (1.5%)		1 (0.7%)			11 (8.1%)	108 (79.4%)	136 (100.0%)
Elected officials	11 (8.1%)	5 (3.7%)	3 (2.2%)	3 (2.2%)		1 (0.7%)		13 (9.6%)	100 (73.5%)	136 (100.0%)
Appointed officials	1 (0.7%)	3 (2.2%)	4 (2.9%)				1 (0.7%)	1 (0.7%)	126 (92.6%)	136 (100.0%)

* This number represents the absolute frequency of answers to the question while the number in parenthesis represents the relative frequency (percent) of those answering the question

validated by a trip to any city or county commission hearing when a land use or building regulatory change is being proposed. There is probably no more vocal or powerful interest group in the community. It is no wonder, therefore, that the respondants rank builders and developers so close to elected officials as those likely to exert political pressure. Running fourth and fifth are, respectively, architects and general contractors.

This data square with the verbal responses of all types and levels of department personnel that we have obtained over the past several years. As construction costs have risen, "do-it-yourselfers" are much more prevalent permit seekers than they once were. Unlike developers and professional contractors and sub-contractors they tend to be unfamiliar with local code requirements and permitting procedures. Further, since they are less likely than builders or contractors to have to deal with building regulatory personnel on a continuing basis, homeowners are probably more likely to complain to elected officials about either substantive, or procedural permitting problems. And, as the data indicate, the elected officials in turn, probably transmit this pressure to regulatory personnel.

It should be noted that the relatively large number of "no answers" to this question is in line with the reticence of many respondents to identify, in writing, the problems associated with political interference in the permitting process. We suspect that this is strongly linked to the job insecurity of most regulatory personnel and, ironically, to the extreme political sensitivity of their roles in local government.

Although we have no direct statistical evidence, we also suspect that the intensity of political pressure on building officials is related to the size of communities and their local government structural type. This is a classic 'political science' proposition which merits investigation in future studies of local regulatory agencies.

Findings Relative to Hypotheses

Overview

Now that we have described the community and agency contexts out of which our information springs, we turn to the findings which bear directly upon the nine hypotheses presented in Chapter I. These hypotheses, restated and reformulated in Chapter VI based on our theoretical expectations, were composed of three sets of independent variables--political, community, and organizational--and four sets of dependent variables--administrative review, personnel professionalism, client/customer information access, and management. Each of these sets was broken down into indicators which could be measured through our survey instrument or by using secondary data sources. In total, we operationalized 11 independent variables and 14 dependent ones. Thus, the total number of "mini-hypotheses' we tested was 11 X 14, or 154.

Tests of association were performed for each of the paired variables in each of the cells, using either the chi square statistic (for nominal/nominal and nominal/ordinal pairs) or Kendall's Tau B statistic (for ordinal/ordinal pairs). Chi square tests the null hypothesis that the value for one variable will not vary as a function of another variable (Blalock 1972). A significant chi square value, measured for our purposes at the .10 probability level, indicates that knowledge of the distribution of one variable will indeed provide some information about the distribution of the other variable. Using this statistic one can demonstrate that there is a significant association between variables, thus rejecting the null hypothesis, but one cannot predict the direction of association. That must be done by looking directly at the data

Kendall's Tau B is a nonparametric measure of association which, unlike Chi square, will predict direction of the linkages between two variables. For our purposes, Tau B's level of significance is also set at the .10 level. When using Tau B, a perfect association would be either +1 or -1, with most values falling somewhere between (Blalock 1972).

To rationally and economically present our findings we restate each of the nine hypotheses and, using the tabulated data, discuss whether or not these can be accepted. At the outset we note that we have found 27 statistically significant associations, and 61 other linkages which, while not statistically sigificant, do show a tendency to either support or reject our hypotheses.

The Political Set

Centralization of Power

P_1 The type of local government structure--council-manager, mayor-council, commission--is significantly related to building regulatory agency decisions to adopt administrative review, personnel professionalism, client information access, and management innovations.

When local government type, as a measure of the centralization of power in a city, is run against the 14 dependent variables we have identified as agency innovations (see Table 31's legend for a recap of these variables) we discover three significant associations which allow us to accept our propositions and two other associations which, while statistically significant, contradict our expectations.

Thus, we find that, relative to the information access set, the city manager form of government tends to be strongly associated with the use of a designated project coordinator or plans "expediter" to help citizens involved in large scale or complex construction move quickly and expeditiously through review phases. With the appropriate degrees of freedom, the chi square value of 4.98603 allows us to reject the null hypothesis at the .08 level. Less strongly related is the link between manager-council government and the clear marking and easy identification of citizens of permit application and plan review stations. Here, we can reject the null hypothesis at the .03 level with two degrees of freedom and a chi square value of 6.52857.

Two other dependent variables in the information access set--use of a customer service coordinator to help explain permit requirements or procedures and the provision of brochures and pamphlets which explain permitting--are not significantly related to manager council structure but, nevertheless, our data show that both tend to follow our expectations. Somewhat more manager council cities use customer service coordinators than do mayor-council cities (41.7 percent to 38.1 percent), and more manager-council cities report that they provide

TABLE 31
CENTRALIZATION OF POWER

Independent Variable	Agency Innovations: Dependent Variables*						
	Administrative Review					Personnel	
	CONTR	APPFM	FCCT	DFRFV	PLREV	6ICT	INSER
LOGOV (Local Government Structural Type)	** χ^2= 9.65372 S = .008 C	** χ^2= 6.61997 S = .07 C	χ^2= 1.27316 S = .52 M	χ^2= 3.21091 S = .20 TF	χ^2= 2.30771 S = .67	** χ^2= 4.88161 S = .06 F	χ^2= 1.51235 S = .46 TF

Independent Variable	Agency Innovations: Dependant Variables						
	Information Access				Management		
	GROCH	CUSSE	PROCO	STAMA	PROM	COMPTU	PROCH
LOGOV (Continued)	χ^2= 1.15479 S = .66 TF	χ^2= .77198 S = .67 TF	** χ^2= 4.99603 S = .06 F	** χ^2= 6.52857 S = .03 F	χ^2= 1.38665 S = .49 TF	χ^2= .92019 S = .92 TF	χ^2= 5.63711 S = .44 TF

Continued

* Legend on following page

TABLE 31
CONTINUED

Cell Symbols

** = Statistically associated

χ^2 = Chi square value

τ = Tau b value

S = Significance level

F = Follows expectations

C = Contradicts expectations

M = Mixed relative to expectations

TF = Tends to follow expectations

TC = Tends to contradict expectations

"TF" and "TC" are used where there is no statistical association but where the tabular data do show some tendency to either support or reject our expectations.

Dependent Variable Labels

CONTP = Contract with private firms for plan review?

APPFM = Have unified permit application forms?

PCCT = Are permit clerks cross-trained?

DEPEV = Have development review committee?

PLREV = Have preliminary plan review process?

BICT = Are building inspectors cross-trained?

INSER = Have in-service training requirements?

BROCH = Have brochures, pamphlets, etc. explaining permit process?

CUSSE = Have designated customer service coordinator?

PROCO = Have designated project coordinator for complex projects?

STAMA = Are permit application/plan review work stations easily identified?

PPOM = Use employee procedure manuals to guide decision-making?

COMPTU = Use computers for recording/recalling permit data, inspections?

PROCH = When were permitting procedures significantly changed/revised?

clearly written brochures and pamphlets to explain permitting procedures and requirements (76.4 percent to 66.7 percent for mayor-council cities)

In the personnel set, we find that local government type, as an indicator of power centralization, is significantly related to the propensity for building inspectors to be cross-trained. Thus, 81.2 percent of manager-council city inspectors tend to be either totally or partially cross-trained, whereas 58.5 percent of mayor-council cities use this innovative procedure. When compared to counties, we find that even more (90 percent) report that their inspectors are either totally or partially cross-trained. This is explained, we believe, by the generally small size of county agencies. When an organization only has one or two inspectors it is, obviously, manadatory for inspectors to be cross-trained.

Though not related at a statistically significant level, our data tend to show that manager-council cities require in-service training for inspectors more than mayor council cities (45.8 percent to 35.0 percent). When we compare this to county respondents, we find that counties and mayor-council cities are about even in this regard, with 36.6 percent of the former requiring in-service training of personnel.

Additional statistically significant associations involve the propensity of cities to contract with private architectural, engineering or general contracting firms to perform plan reviews, and the use of unified permit application forms. But, in both cases, we find the tendency running counter to our expectations.

While we thought that manager cities would be much more likely to farm out plan reviews than mayor-council cities, Table 32 shows that just the opposite takes place.

Clearly, there are other forces at work here besides the structure of local city government. One of these may be community size. When the data is sorted by population size we find a rather unmistakable link--as cities get smaller, they are more likely to contract with private firms for plan review services. The largest cities in Florida tend to have mayor-council forms of government but are able to afford expert in-house staff, while the smallest cities--also more likely to have mayor-council government than mid-sized cities, are unable to support this luxury.

Relative to the use of "unified" permit application forms our expectations were that manager cities would be the more frequent users of these innovations. However, we find this not to be the case. The employment of totally and partially unified application forms is more than twice as likely in mayor-council cities, (42 percent have them) as compared to manager cities (20.8 percent). It should be noted that while most jurisdictions still have not combined application forms, Florida counties seem to be more likely than cities to have attempted some sort of "form reform" (73.4 percent of cities still have separate application forms as compared to 52.4 percent of the counties). Again, this may be related to the generally small size and rural nature of many county agencies. Thus, relative to counties, at least, we may not be dealing with reform as much as with a far less complex regulatory and development milieu which has been less

TABLE 32
TYPE OF CITY GOVERNMENT CONTRACTING OUT PLAN REVIEWS

Type of Government Structure	Contract out Plan Review?	
	Yes	No
Manager Council	18 (25%)	54 (75%)
Mayor Council	12 (57.1%)	9 (42.9%)
Commission	1 (100%)	0 (0.0%)

likely to spawn (and is less likely to tolerate) an intricate paperwork system for permit applications.

When we examine the management dependent variables--use of employee procedure manuals, use of computers for record keeping, and recentness of significant procedural changes--we find no statistically significant associations with the type of local government independent variable. However, in each case the data do tend to support our expectations. Thus, manager-council cities report more use of employee procedural manuals than mayor type cities, more use of computers for recording and recalling permits, and are more likely to have significantly revised permitting procedures within the six-month period immediately preceeding the completing of the questionnaire.

In summary, the evidence suggest, for local government structural type as an indicator of power centralization in a community, that we can accept the hypothesis for 40 percent of the administrative review set (contracting out plan review and use of unified application forms), for 50 percent of the personnel professional set (cross-training of building inspectors), for 50 percent of the information access set (use of procedure manuals and having clearly identified work stations), and for none of the management set. Out of all the linkages, personnel professionalism and information access seem the most clearly related sets to power centralization.

Autonomy of Decision Making

F_2 There is a significant association between building officials' perceptions of political interference with permitting processes and the propensity of their agencies to adopt administrative review, personnel professionalism, client information access, and management innovations.

This hypothesis, which attempted to guage the propensity to adopt innovations by "political slack" perceptions of the building official (e.g. the relative freedom from significant political pressure and interference) produced rather disappointing results. A major reason for this was that only 12 respondents (8.8 percent) believed that permitting processes in their jurisdictions were subject to unusually strong political pressures whereas 90.4 percent said they were not (.7 percent did not answer). This was very different from our expectations, and, as noted previously, very different from the reports of rank and file employees. We now suspect that the question was poorly phrased and, consequently, failed to tap an important, albeit still hidden, reality.

Irrespective of that, no significant chi square values could be generated for any of the 14 mini-hypothesis which composed the hypothesis. Consequently, none of it can be accepted. Table 33 demonstrates the results which were obtained.

Distributive Regulation

F_3 A statistically significant relationship exists between building official's attitudes toward variable enforcement of building codes and their agency's adoption of administrative review, personnel professionalism, client information access, or management innovations.

TABLE 33
AUTONOMY OF DECISION MAKING

Independent Variable	Agency Innovations Dependent Variables*						
	Administrative Review					Personnel	
	CONTR	APPEM	PCCT	DEREV	PLREV	BICT	INSER
PERPOL (Political Interference)	x^2= 1.60296 S = .20 M	x^2= 1.55243 S = .46 H	x^2= 3.06970 S = .21 TF	x^2= 1.71689 S = .19 TC	x^2= 1.76413 S = .41 M	x^2= 2.60525 S = .27 H	x^2= .08317 S = .77

Independent Variable	Agency Innovations Dependent Variables						
	Information Access				Management		
	BROCH	CUSSE	PROCO	STAMA	PROM	COMPTU	PROCH
PERPOL (Continued)	x^2= .03837 S = .54	x^2= 1.91144 S = .16 TF	x^2= 1.14548 S = .28 TF	x^2= 1.73534 S = .18 TC	x^2= .50947 S = .47 TC	x^2= 2.03650 S = .36	x^2= 2.16264 S = .53 TC

Continued

* See Table 31 for Legend

While we were surprised at the relatively low level of affirmative responses to the last question, we were equally surprised at the relatively large number of affirmative responses to the question which sought to measure attitudes toward variable enforcement of building codes. Almost 17 percent of the building officials (23) thought it "okay for the level of code enforcement to vary depending upon who the client is." Thus, a sizeable number of local officials approve of "distributive regulation" in local building codes.

However, contrary to our expectations, this attitude has little or no relation to the likelihood that agencies will utilize any of the innovations we have identified as dependent variables. As Table 34 shows, in only two cases--the clear marking of review stations and the use of computers--is any significant chi square value found. And in both cases, when the data is examined more closely, it depicts results *contrary* to the expectations of our alternative hypotheses.

In only two instances, the use of outside firms for plan reviews and the use of employee procedure manuals, does the data show *non*-significant findings which might tend to support our alternative hypotheses.

Consequently, we cannot with confidence accept the hypothesis as it is now stated for this independent variable.

The Community Set

Growth

P_4 Community population change between 1970 and 1977 is related to building inspection agency's use of innovative administrative review, personnel professionalism, client information access, and management features.

TABLE 34
DISTRIBUTIVE REGULATION

Independent Variable	Agency Innovations Dependent Variables*						
	Administrative Review					Personnel	
	CONTR	APPFM	PCCT	DEREV	PLREV	BICT	INSER
VARY (Variable Enforcement of Code)	χ^2 1 31899 S = 25 TF	χ^2= .53528 S = .76	χ^2= 1 09092 S = 58	χ^2= 10968 S = 74	χ^2= 1 35084 S = .60	χ^2= 1 29902 S = 52	χ^2= .92600 S = .33

Independent Variable	Agency Innovations Dependent Variables						
	Information Access				Management		
	BROCH	CUSSE	PROCO	STAMA	PROM	COMPTU	PROCH
VARY (Continued)	χ^2= 1 21965 S = .26 TC	χ^2= .22752 S = 63	χ^2- 15276 S = 69	** χ^2= 4 0054 S = .04 C	χ^2= .90301 S = .34 TF	** χ^2=10 00246 S = .0067 C	χ^2= 2 71227 S = .43

Continued

* See Table 31 for Legend

Upon reviewing the data in Table 35, we find that population change within the reporting jurisdictions appears to have little relationship to the adoption of the identified innovations. The only statistically significant association revealed is that between population change and agencies' revisions of permitting procedures.

Here, using the Tau B statistic, we find that as the percent population change increases, it is more likely that agencies will have significantly changed permitting procedures within one year of their survey answers. This finding jives with our alternative hypothesis--one would expect procedural changes in permitting as population grows.

In a borderline sitaution, where the chi square value is 17.23223, and the significance level is just above our .10 cut-off (at .1040) we find in-service training requirements to be positively linked to increasing population change. Again, this is in line with our expectations.

For most of the data, however, there are insufficient statistically significant associations and we can, therefore, only confidently accept a small part of the hypothesis.

Size

H_5 There exists a significant association between community population size and the decision of building inspection agencies to adopt administrative review, personnel professionalism, client information access, and management innovations.

For this independent variable, we suggested a series of differential results. The smaller communities (25,000 population and below), we believed, would be least likely to have innovation agencies,

TABLE 35
GROWTH

Independent Variable	Agency Innovations Dependent Variables*						
	Administrative Review					Personnel	
	CORTR	APPFM	PCCT	DEREV	PLREV	BICT	INSER
POPCH (Population Growth, 1970-1977)	χ^2= 8.18090 S = .88	χ^2=14.37390 S = .08 H	χ^2=17.59980 S = .71 M	χ^2=11.54726 S = .39	χ^2=19.11382 S = .63 M	χ^2=27.95407 S = .17 M	χ^2=17.13223 S = .1040 TF

Independent Variable	Agency Innovations Dependent Variables						
	Information Access				Management		
	BROCH	CUSSE	PROCO	STAMA	FROM	COMPTU	PROCH
POPCH (Continued)	χ^2= 8.34306 S = .68	χ^2=13.39767 S = .26	χ^2=16.13272 S = .17	χ^2=11.73877 S = .39	χ^2=12.75802 S = .30 TF	χ^2=15.27318 S = .65 TF	r =-0.19450** S = .0022 F

Continued

* See Table 31 for Legend

while the largest communities (250,000 population and above) would have agencies with mixed innovation records; they would be more likely to adopt administrative review features which deal with agency coordination (development review committees, preliminary plan review meetings, and unified permit application forms) and management innovations which help large agencies control employees and data (procedure manuals, and computerized permit record keeping), but less likely to adopt the other sets of innovations than agencies in medium-sized communities (between 25,000 and 250,000 population). We expect that the latter agencies would be the most prolific innovators.

Our results belie these expectations. For the most part, as Table 36 illustrates, community size does not seem to be directly associated with the adoption of most of the identified agency innovations, although it is significantly related to three--contracting with private firms for plan reviews, cross-training of building inspectors, and use of in-service training requirements).

In the first instance, while size does seem to be linked to the propensity to contract out plan reviews, the breakdown by population category provides us with somewhat mixed results relative to our expectations. For example, as Table 37 demonstrates, we were correct in predicting that large communities would be less likely to use this type of feature--100 percent of them do not contract out plan reviews. However, while medium sized communities make more use of this innovation, they are much less likely to contract out plan reviews than the smaller jurisdictions.

TABLE 36
SIZE

Independent Variable	Agency Innovations Dependent Variables*						
	Administrative Review					Personnel	
	CONTR	APPFM	PCCT	DEREV	PLREV	BICT	IRSER
SIZE (Population Size)	** χ^2=15 36785 S = 0040 C	χ^2=11 93062 S = 15 M	χ^2= 8 62548 S 37 M	χ^2= 53074 S = 97	χ^2= 3 06210 S = 93	** χ^2=54 37386 S = 0000 C	** χ^2=11 56770 S = 0209 M

Independent Variable	Agency Innovations Dependent Variables						
	Information Access				Management		
	MROCH	CUSSE	PROCO	STAMA	PROM	COMPTU	PROCH
SIZE (Continued)	χ^2= 3 02056 S = 55 M	χ^2= 3 55597 S = 46 M	χ^2= 5 22379 S = 26 M	χ^2= 3 32300 S = 50	χ^2= 3 50148 S = 47	χ^2= 7 2228 S = 28 TF	χ^2= 8 03920 S = 78 TF

Continued

* See Table 31 for Legend

TABLE 37
CONTRACTING OUT PLAN REVIEW BY COMMUNITY SIZE

	Contract?	
Size	Yes	No
250,000 +	0 (0.0%)	5 (100%)
50,000 - 249,999	3 (13%)	20 (87%)
25,000 - 49,999	6 (19.4%)	25 (80.6%)
10,000 - 24,999	10 (23.8%)	32 (76.2)
9,999 and below	17 (51.5%)	16 (48.5%)
Total	36 (26.9%)	98 (73.1%)

Similarly, relative to cross-training of building inspectors, there is a strong association (chi square of 54.37388) between the size of the community and the tendency to cross-train inspectors As communities get smaller, they are far more likely to have cross-trained personnel, for reasons pointed out earlier

Finally, for in-service training features, we do indeed find that the mid-sized agencies are more likely to have this requirement than either the largest or smallest communities, with the latter jurisdictions the least likely users of in-service training Since this linkage, combined with the association found for the cross-training variable, constitute 100 percent of the personnel professionalism set, we feel justified in accepting that part of the hypothesis which pertains to this set. However, we cannot do so for the rest of the hypothesis

Economic Competition

P_6 Local economic competition between builders and developers, as perceived by the chief building official, is related to agency propensity to make use of administrative review, personnel professionalism, client information access, and management innovations

Our hypothesis predicted an inverse relationship between the variables in these sets, that is, we suspected that high levels of perceived competition between local builders and developers would negatively correlate with the use of innovative agency features. As Table 38 shows, we uncovered three statistically significant relationships, only one of which is in line with our expectations. We did find four instances where, although the values are not at significant levels, the data tends to confirm our suspicions In all

TABLE 38
ECONOMIC COMPETITION

Independent Variable	Agency Innovations Dependent Variables*						
	Administrative Review					Personnel	
	CONTR	APPFM	PCCT	DENEV	PLREV	BICT	INSER
ECONC (Economic Competition Between Builders and Developers)	χ^2= 2.25963 S = .32 TF	** χ^2= 8.62465 S = .0712 C	χ^2= .74584 S = .94 TF	χ^2= 3.35491 S = .86 M	χ^2= 5.16518 S = .26 TC	** χ^2=12.13515 S = .0164 F	** χ^2= 6.05055 S = .0485 C

Independent Variable	Agency Innovations Dependent Variables						
	Information Access				Management		
	BROCH	CUSSE	PROCO	STAMA	PROM	COMPTU	PROCH
ECONC (Continued)	χ^2= .87689 S = .64 TC	χ^2= .87027 S = .64 M	χ^2= .66370 S = .71 TF	χ^2= 3.24446 S = .19 M	χ^2= .47844 S = .78 TF	χ^2= 3.41871 S = .49 TC	χ^2= .00613 S = .46

[illegible]

* See Table 31 for Legend

other cases, however, the associations or data were either opposite our expectations, or evidenced no discernable trends one way or the other.

With a chi square value of 12.13515 at the appropriate degrees of freedom, and a .0164 significance level, we find that decreasing economic competition tends to be linked to the propensity of agencies to have totally cross-trained building inspectors, a variable in the personnel professionalism set. We suspected that community size may be an intervening variable which affects this relationship. Indeed, as previously noted, perceptions of intense economic competition do fall off as population size decreases.

While we cannot prove causality, when the strength of the associations are compared we find that, for size, the chi square value is much higher than that obtained for economic competition. Even so, we still believe the link between cross-training and the latter independent variable to be valid.

Interestingly, while cross-training's relation to economic competition is congruent with our initial suspicions, the other variable within the personnel professionalism set--the requirement of inservice training--is directly opposite our expectations. Thus, in accepting the hypothesis at the .0485 level, we find it much more likely to have agency in-service training requirements in areas of high economic competition than in ones that have little competition. Table 39 demonstrates that relationship for those responding to these questions.

TABLE 39
ECONOMIC COMPETITION AND INSERVICE TRAINING

Economic Competition	Have Inservice Training? Yes	Have Inservice Training? No
Highly competitive	22 (55%)	18 (45%)
Moderately competitive	24 (36.4%)	42 (63.6%)
Low competition	3 (21.4%)	11 (78.6%)
Total		

Indeed, it is absolutely rational for community agencies which are operating in stressful environments to make sure that their personnel are kept informed of the latest developments in the field. Our alternative hypothesis may have been far too cynical in this regard.

We also find, among the administrative review set variables, that economic competition is linked to the agency propensity to have unified application forms. Specifically, and contrary to our expectations, agencies in highly competitive building and development milieus, seem more likely to have unified application forms than those in less competition situations. This is surprising since we believed that reform to be one of the most difficult to make in such threatening environments. One explanation may be that frustrations over forms grow at a much more intense, perhaps exponential rate, than expected as competition increases. Hence, forms are among the first items to be revamped. However, further research would be necessary to establish this point.

Lending some credence to our alternative hypotheses, but with not enough statistical clout to be valid from a scientific standpoint, are findings for the administrative review variables which deal with contracting out plan reviews, and the cross-training of permit clerks. Likewise, the information access variable which relates to use of a project coordinator, and the management variable indicated by use of procedural manuals, report data which tends to support our alternative hypotheses. Of these, the most clear-cut case is the apparent tendency for low competition communities to make greater use of external plan reviewing staff, a function we have previously identified as constituting the most highly politicized phase of the permitting process In reviewing the data here we find that of those agencies which are perceived to be located in a highly competitive economic environment, only 22.5 percent contract out plan reviews, whereas 25.8 percent of the 'moderately competitive' perceivers farm out these exams, while 42.9 percent of the "low competition' perceivers do so

Three of our cross-tabulations produce data which tend to be contrary to our expectations relative to economic competition, but which are not at a statistically significant level. Two of these--the provision of brochures and pamphlets to explain permitting and the use of preliminary plan review committees are particularly interesting

In the first case, we find that in 'low competition" communities, agencies are somewhat less likely to have explanatory brochures and pamphlets for the public than those in moderate or high competition communities While this is antithetical to our alternative hypothesis, it seems reasonable that the demand for regulatory information may well be greater in those jurisdictions which are subject to more intense push-pull economic stresses

In the second case, the data indicate two points; first, informal preliminary plan review processes are far more widespread than are formal (e.g officially constituted or designated) processes. Of the 115 individuals responding, 36.4 percent stated that their agencies used a formal process, 58 7 percent said that an informal process was used, and 5 percent noted that their agencies had no preliminary plan review at all. Second, contrary to expectations, substantially more "high competition" respondents stated that their agencies had formal preliminary plan reviews than did "low competition" respondents. However, the latter group was more likely to use informal plan review processes than the "high competition" group.

This data suggest that, where local economic competition is intense in a community, it may be more likely that structured, highly visible negotiating organs are needed to channel and control conflict than in situations where economic competition is at a lower level of intensity. In that atmosphere--where the energy generated by the competitive battle is less threatening--there may be more room for flexible and informal bargaining between the participants to the regulatory process. Indeed, this situation might be more likely to produce the "consensus" regulation that the building and development industry has voiced a need for as opposed to the "adversarial" regulation now being produced.[4]

The Organizational Set

Leadership Professional Orientations

P_7 The professional orientations of agency chiefs, manifested in attitudes toward job entrance requirements, professional certification of inspectors, and perceptions of inspector discretion levels, is associated with the tendency of their agencies to adopt administrative review, personnel professionalism, client information access, and management innovations.

Because this hypothesis, even more than its predecessors, is composed of a number of relatively distinct parts, we will consider each separately. Together, however, they directly bear upon the professional orientation of building regulatory agency leaders.

Increasing job entrance requirements

We suspect that more professional administrators would generally favor increasing the relatively low level local entrance requirements for Florida's building inspectors. Further, we hypothesized that the more professional administrators would be likely to head agencies which used the organizational innovations identified as our dependent variables. The statistical strength of our findings, however, is too weak to support these assumptions. As Table 40 demonstrates, in no instance do we find a relationship which allows us to clearly accept part (or all) of the hypothesis, although we do note that in five instances the data do tend to support our expectations.

In the most vivid of the latter cases, we have a borderline chi square value of 2.13870, at a .1436 significance level. Here, the data suggest that building officials who favor increasing entrance requirements also tend to favor in-service training for their personnel more frequently than those who are opposed to increasing entrance requirements. We expected this to be a much stronger positive correlation than the data revealed.

Professional certification

As a clear indicator of professionalism, we expected officials who favored certification (or standardization) of inspector credentials, to also preside over agencies which incorporated more of the described innovations.

TABLE 40
PROFESSIONAL ORIENTATIONS JOB REQUIREMENTS

Independent Variable	Agency Innovations Dependent Variables*						
	Administrative Review					Personnel	
	CONTR	APPFM	PCCT	OEREV	FLREV	BICT	INSER
IR (Increasing Job Requirements)	x^2= 1.28900 S = .26 TF	x^2= 3.37712 S = .18 TF	x^2= 1.34896 S = .50 M	x^2= .11280 S = .73 TF	x^2= 1.78526 S = .40 M	x^2= .98196 S = .61 TF	x^2= 2.13870 S = .1436 TF

Independent Variable	Agency Innovations Dependent Variables						
	Information Access				Management		
	BROCH	CUSSE	PROCO	STAMA	PROM	COMPTU	PROCH
IR (Continued)	x^2= .00135 S = .97	x^2= .00671 S = .93	x^2= .00570 S = .93	x^2= .08385 S = .77	x^2= .03502 S = .85	x^2= 2.68754 S = .26 TC	x^2= .30462 S = .95

Continued

* See Table 31 for Legend

In only one case--that of the cross-training of inspectors--can we easily accept our hypothesis. However, as Table 41 demonstrates, several of the remaining cross-tabulations produced findings which, though not statistically significant, tend to support our expectations.

We can also accept the hypothesis relative to the link between attitudes favoring professional certification and the identification of whether or not plan review work stations are clearly identified. In this instance, however, our finding is opposite our expectations: a higher proportion of those against certification report that their work stations are clearly marked than those in favor of certification. This tends to suggest that the professionalism ethos may not be as strongly connected to the physical identification of regulatory locales as we previously believed.

In addition to this finding, we note three cases in which, though not statistically powerful enough, the data tend to oppose our expectations. One of these instances is particularly surprising insomuch as we find, within the management set, that a higher proportion of officials who favor professional certification do not use employee procedural manuals than those who are against certification. We certainly expected the reverse. One explanation may be, of course, that the receptivity to a particular professional goal may not necessarily mean that the agency will have organizationally accepted any one particular innovation.

In sum, even though we have two statistically significant associations within these variables and a good number of data trends,

TABLE 41
PROFESSIONAL ORIENTATIONS PROFESSIONAL CERTIFICATION

Independent Variable	Agency Innovations Dependent Variables*						
	Administrative Review					Personnel	
	CONTR	APPFM	PCCT	OFREV	PLREV	SICT	INSER
PROFC (Professional Certification)	χ^2= 1.39594 S = .15 TF	χ^2 2.25296 S = .32 TC	χ^2= 1.46454 S = .48	χ^2= .04658 S = .62 TF	χ^2 2.63550 S = .25 M	** χ^2= 4.93490 S = .0048 F	** χ^2= 1.17602 S = .27 TF

Independent Variable	Agency Innovations Dependent Variables						
	Information Access				Management		
	SROCH	CUSSE	PROCO	STAMA	PROM	COMPTU	PROCH
PROFC (Continued)	χ^2= 2.11089 S = .14 TF	χ^2= .50008 S = .47 TF	χ^2= 1.31874 S = .25 TF	** χ^2= 3.69231 S = .0547 C	χ^2= .57292 S = .44 TC	χ^2= .75878 S = .68 TF	χ^2= 1.31007 S = .72 TC

Continued

* See Table 31 for Legend

we are not sufficiently confident in the results to accept the entire hypothesis for professional certification

Inspector discretion

As one of our key professionalism indicators, we hypothesized that officials in professionalized agencies would tend to attribute more rather than less discretion to their inspectors in enforcing the building code. We expected therefore, that higher discretion ratings would be meaningfully linked to agency use of administrative, personnel, information, and management innovations Although we found three instances where our statistical associations are strong enough to let us reject the null hypothesis, our data point, interestingly, in the opposite direction

For example, as Table 42 illustrates, within the information access set are relationships between agency use of customer service coordinators, use of project coordinators and the discretion rating of employees. However, in both instances the data clearly report trends counter to our expectations.

Table 43 demonstrates that as officials decrease in their rating of inspector discretion, agencies are more likely to have customer service coordinators. An even more pronounced pattern is found for the use of project coordinators for complex construction. Officials who report no discretion in their agencies on the part of line inspectors are more than four times as likely to indicate that their agencies use project coordinators

TABLE 42
PROFESSIONAL ORIENTATIONS: INSPECTOR DISCRETION

Independent Variable	Agency Innovations: Dependent Variables*						
	Administrative Review					Personnel	
	CONTR	APPFM	PCCT	DEREV	PLREV	BICT	INSER
DISCRE (Inspector Discretion)	χ^2= 3.95136 S = .26	χ^2= 2.45296 S = .87	χ^2= 4.36054 S = .62 TC	χ^2= .92955 S = .61 TC	χ^2= 5.96794 S = .42 M	χ^2= 6.86309 S = .33 TF	χ^2= 2.05704 S = .56 TE

Independent Variable	Agency Innovations: Dependent Variables						
	Information Access				Management		
	BROCH	CUSSE	PROCD	STAMA	PROM	COMPTU	PROCH
DISCRE (Continued)	χ^2= 3.20432 S = .36 TE	** χ^2= 6.28760 S = .0984 C	** χ^2= 7.51514 S = .0572 C	χ^2= 2.96742 S = .39	** χ^2=19.34920 S = .0002 C	χ^2= 8.15033 S = .22	g = -.02019 S = .39 TF

Continued

* See Table 31 for Legend

TABLE 43
DISCRETION RATINGS AND USE OF CUSTOMER SERVICE COORDINATORS

Discretion Level Rating	Use Customer Service Coordinator? Yes	No
Significant discretion	3 (16.7%)	15 (83.3%)
Moderate discretion	8 (25.8%)	23 (74.2%)
Little discretion	23 (39.0%)	36 (61.0%)
No discretion	13 (48.1%)	14 (51.9%)
Can't judge	1 (missing)	0 (0.0%)
Total	47 (34.8%)	88 (62.2%)

This turn of events, though somewhat puzzling, might be explained if we knew just how much discretion officials invested in, or attributed to customer service representatives or project coordinators. Or, even more practically, it may be that where building officials perceive their inspectors to possess (legitimately) a significant amount of discretion in enforcing the code, there is less need for customer service or project coordinators since inspectors feel free enough to provide additional advice and assistance to clients as they move through the permitting and enforcement phases. This may, of course, open the way for 'distributive regulation' abuses, which would be counter to professional norms. Thus, the costs and benefits of professionalism might cancel each other out.

In any case, the findings above are even more curious when we look at results for one of the other variables in the information access set--use of pamphlets and brochures to explain permitting procedures. Here, although the association is not statistically significant, we find that there is a clear progression; as discretion ratings increase, it is more likely that agencies will use brochures and pamphlets to describe procedures for citizens. This reliance upon written materials works just the opposite for use of employee procedural manuals, part of the management set of variables.

Here, we find a very strong statistical association (a chi square value of 19.34920, and significance level of .0002) between low discretion levels and use of employee manuals for guidance in everyday decision-making. This is contrary to our expectations, but in line with some of our previous findings. It is almost as if the department heads were saying, "we officially tolerate no inspector discretion--we go by the book." In practice such attitudes are grossly unrealistic since the nature of the inspector's job, as a street-level bureaucrat, requires a large measure of inherent discretion. The researcher would be interested in measuring frustrating levels in such organizations.

In sum, we find sufficient justification to accept the hypothesis for 50 percent of the information access variables as they pertain to this independent set. We suggest, for further research, that there may be an important discretion-related dichotomy between staff-provided information and written information provided the public (directly, through brochures or indirectly, through employee procedure manuals). That is, the means of information dissemination to the public in regulatory agencies may be of central importance as it relates to perceptable or allowable staff discretion levels.

Organizational Slack

P_8 The adoption of innovative administrative review, personnel professionalism, client information access, and management innovation features in building inspection agencies is related to the extent that agency budgets are covered by generated permit fees.

We chose to measure the extent to which agencies covered their expenses with permit fee revenues as an indicator of organizational slack. Our reasoning was that as revenues increase, agency personnel would have more flexibility to attempt to make risky changes in operations or procedures.

The results of the cross-tabulations here produced five statistically significant associations, tying local government structure type as the most "productive" match-up between variable sets. Of these links, three clearly support our expectations, one contradicts and one shows rather mixed results relative to our alternative hypothesis. Table 44 illustrates the associations uncovered.

Two of these associations were found within the administrative review set. In the first instance--use of unified application forms--we can accept the hypothesis at the .0272 level. Here we find that, while most Florida agencies still use separate permit application forms, it appears that the least "wealthy" agencies (e.g., those whose revenues cover only between 0 and 24 percent of agency costs) are, proportionately, the largest users of unified application forms out of those who do use them. About 70 percent of the poor agencies have unified forms compared to 27.5 percent of the "wealthiest" agencies (those whose revenues cover 100 percent or more of agency expenses). We may explain this phenomenon by the fact that the great majority (71 percent) of the poorest agencies are found in the smallest communities. These, as we have previously noted, have probably the least complicated and competitive building and development environments. Hence, as expressed relative to the economic competition and local government type variables, we would expect such communities to be more likely to have extremely simplified forms and procedures. The fact that agency budgets are only slightly covered by generated permit fees is, most likely, a coincidental rather than a causal factor here.

TABLE 44
ORGANIZATIONAL SLACK

Independent Variable	Agency Innovations Dependent Variables*						
	Administrative Review					Personnel	
	CONTR	APPFM	PCCT	OEREV	PLREV	BICT	INSER
AGBUD (Percent Agency Budget Covered By Permit Fees)	χ^2= 1.45635 S = .53 M	** χ^2=17.29677 S = .0272 C	χ^2=11.76569 S = .16 TF	** χ^2= 9.44732 S = .0508 F	χ^2= 8.54432 S = .38 H	χ^2= 8.75705 S = .36 M	χ^2= 2.55364 S = .63 TF

Independent Variable	Agency Innovations Dependent Variables						
	Information Access				Management		
	GROCH	CUSSE	PROCO	STANA	PROM	COMPTU	PROCH
AGBUD (Continued)	χ^2= 2.37262 S = .66 H	χ^2= 3.30124 S = .50 M	** χ^2= 8.35507 S = .0794 H	χ^2= 4.52287 S = .33 TF	** χ^2=10.32278 S = .0353 F	χ^2=10.28674 S = .24 TF	** ß = .25535 S = .003 F

Continue

* See Table 31 for Legend

The second associated variable in the administrative review set is the development review committee variable. With a chi square value of 9.44732 at four degrees of freedom, we accept the hypothesis at the .0508 level. Unlike its predecessor, the data distribution for this variable tends to confirm our alternative hypothesis. As agency revenues climb beyond 75 percent of operating costs, upwards of 80 percent of the respondents indicate that they have a development review committee procedure.

Similar supportive findings are also present for two management variables--use of employee procedure manuals and the revision of permitting processes within a year of responding to the questionnaire. In the first case we can accept the hypothesis at the .0353 level. For the second case, using the Tau B statistic (since both variables are ordered) we find a relatively strong relationship between recently changed procedures and organizational financial slack. "Wealthier" agencies tend to have significantly changed their procedures more recently. Also supporting our alternative hypothesis, but at non-significant levels, are data reported for use of computers, in-service training requirements, and cross-training of permit clerks.

One might make the argument that it is natural for agencies that have more resources at their disposal to make more use of the relatively costly innovations than regulatory organizations with less slack. That point, however, is not supported by evidence on use of customer service coordinators or project coordinators--added personnel who could only be supported by relatively well-off systems. When one looks at the data for these variables, absolutely no relation is found for the first set and a very mixed picture is presented by the second.

In the latter case, although the chi square values are such that we can accept the hypothesis at the .0794 level, we find a bimodal distribution of the data which shows that very good revenue producing agencies and very poor revenue producers tend to make more use of project coordinators than mid-range producers. This findings is somewhat, though not totally, inconsistent with the notion that only wealthy agencies would be capable of employing project coordinators for complex construction.

To conclude, the agency revenue/cost variable, as an indicator of organization slack, has produced five significant associations. Relative to the management set, we can accept two-thirds of the hypothesis. And, for the administrative review variables, 40 percent achieve significance levels which permit us to accept part of the hypothesis. In all other instances, our results are either too weak or mixed to allow any confident statements.

Organizational Boundary Spanning

P_9 Whether or not a building inspection department works closely with the local planning agency has a significant association with its tendency to adapt innovative administrative review-personnel professionalism, client information access, and management features.

As the last hypothesis generated within the organizational variable set, we postulated that the closer a construction regulatory agency worked with the local planning department, the more likely it was that the building department would take on some of the standard operating procedures of the more professionalized planning agency.

We found three instances which clearly support this contention at a statistically significant level, and seven other cases which also follow our expectations, but not with the desired statistical weight of evidence. As Table 45 illustrates, in only one instance does the data go against our expectations. And in that case, contracting out plan reviews, there is insufficient statistical weight to establish the value at a significant level of association.

It is interesting to note, that although the three significant relationships fall in two distinct variable sets, all are directly related to the coordination of data or reviews in order to fulfill agency regulatory requirements. Thus, as building departments work closer with the local planning agency they are far more likely to utilize development review committees, formal preliminary plan review sessions, and project coordinators to facilitate the sharing of information among regulatory participants and the expeditious routing of complex plans. This linkage is particularly strong relative to the use of development review committees, where we can accept the hypothesis at the .0001 level.

While, in general, we still have too few other statistically valid associations to accept more of the hypothesis, the tendencies displayed by the sum of the variables in these sets leads us to believe that there is a far stronger linkage between working closely with a planning agency and the adoption of professional-innovative features than our data, on the surface reveals. We would, therefore, commend the boundary-spanning concept for further study, especially as it relates to instituting change in those organizations which combine

TABLE 45
ORGANIZATIONAL BOUNDARY SPANNING

Independent Variable	Agency Innovations Dependant Variables*						
	Administrative Review					Personnel	
	CONTR	APPFM	PCCT	DEREV	PLREV	BICT	INSER
WCWP (Boundary Spanning: Work Closely With Planning Agency)	χ^2= 3.92463 S = .26 TC	χ^2= 5.74904 S = .45 M	χ^2= 4.50619 S = .60 H	** χ^2=20.57063 S = .0001 F	** χ^2=12.22414 S = .0572 F	χ^2= 8.71580 S = .19 TF	χ^2= .97468 S = .80 TF

Independent Variable	Agency Innovations Dependent Variables						
	Information Access				Management		
	BROCH	CUSSE	PROCO	STAMA	PROM	COMPTU	PROCH
WCWP (Continued)	χ^2= 5.05938 S = .16 TF	χ^2= 5.39943 S = .14 TF	** χ^2=11.28146 S = .0103 F	χ^2= 3.94961 S = .27 TF	χ^2= 4.61168 S = .20 TF	χ^2= 5.10060 S = .53 TF	χ^2= 5.55961 S = .78

Continued

*See Table 37 for Legend

street-level bureaucratic functions with vital public regulatory goals.

Summary

This Chapter has reviewed, on an extensive basis, the empirical evidence generated by the hypotheses presented in Chapter I and discussed in Chapter VI. Of the 154 mini-postulations which resulted from these hypotheses, we found 27 statistically significant associations and 61 other cases where the data tended to reject or support our expectations. This is a far better record than would have been obtained merely by chance at the .10 significance level. These findings are the basis for our broad-scale conclusions, presented in the following chapter.

Notes

1. Compared to South Floridians, panhandle Florida residents have been shown to be much more likely to favor increased growth and development. See, for example, Richard Schneider and Moira Roberts, eds. 1974. Environment and Florida Voters: Their concerns on growth, energy, pollution, land-use controls, in-migration taxes, politics, and the future of the state. Gainesville, Florida: Urban and Regional Development Center.

2. The Building Officials Association of Florida provides voluntary registration and certification for individuals involved in building code administration or enforcement. BOAF is headquartered at Florida Atlantic University in Boca Raton.

3. In a 1979 nationwide survey of average salaries of municipal officials, the chief building official ranked 20th out of 24 officials, with an average salary of $17,901. Highest paid were superintendents of schools ($34,094) and lowest paid were clerks ($15,459). See Stanley M. Wolfson. 1980. "Salaries of Municipal Officers." In The Municipal Year Book 1980. Washington, D.C.: ICMA, p. 84.

4 The investigation and development of 'consensus regulations' of the building industry by the federal government are prime objectives of the National Institute of Building Sciences (NIBS), created by Congress in 1974

CHAPTER IX

SUMMARY AND CONCLUSIONS

Introduction

This Chapter offers a summary of the critical findings presented in the previous section. Following this, we discuss some of the theoretical and practical implications of our findings and conclude with remarks on the problems associated with instituting innovative change in public regulatory agencies.

Summary of Findings

To provide some measure of the relative importance of the independent variables tested, we have ranked the variables on the basis of the number of statistically significant associations each has generated vis-a-vis the dependent sets. Table 46 shows that the most "powerful" innovative indicators among our independent variables are the type of local government structure in a community--a political set measure of the centralization of power--and the percent that agency revenues cover operating expenses--a gauge of organizational slack. Each of these variables produced five significant associations and in so doing, together accounted for slightly more than 37 percent of all the critical associations.

TABLE 46
RANKING OF INDEPENDENT VARIABLES

Variable	Set	Indicator of	Number of Associations	Rank
Type local government structure (city only)	Political	Centralization of Power	5	1
Agency budget covered by revenues	Organizational	Organizational slack	5	1
Rating of working closely with planning agency	Organizational	Boundary spanning activities	3	2
Rating of inspector discretion levels	Organizational	Professionalism	3	2
Economic competition between local builders and developers	Community	Uncertain and threatening environments	3	2
Community population size	Community	Heterogeneity and employee/data control needs	3	2
Attitude toward professional certification	Organizational	Professionalism	2	3
Attitude toward variable enforcement	Political	Distributive regulation	2	3
Population change 1970 1977	Community	Growth (distress, then slack innovation conditions)	1	4

Continued

TABLE 46
CONTINUED

Variable	Set	Indicator of	Number of Associations	Rank
Perceptions of political pressure, interference with agency operations	Political	Autonomy of agency decision making	0	5
Attitudes toward increasing agency entrance requirements	Organizational	Professionalism	0	5
Total			27	

Tied for second place are two organizational set variables--working closely with the local planning agency and the discretion ratings of inspectors, as well as two community variables--community size and perceived economic competition between local builders and developers. Each of the latter variables accounted for three associations, or a total of 44 percent of the sum of the relationships uncovered.

The third rank is composed of the organizational set variable which measures attitudes toward professional certification, and the political set variable which seeks to gauge the extent to which distributive regulation is a factor in adopting or rejecting innovations.

The fourth rank has a lone occupant--the population change variable--having generated only one significant association.

The fifth and lowest rank is shared by the political set variable which aimed to measure the autonomy of decision-making by political pressures perceived to be exerted on agency operations, and the organizational variable which sought to determine the link between attitudes toward increasing agency entrance requirements and organizational innovations. These variables produced no statistically significant associations.

It should be noted that, in the absence of any other quantitative indicators, where there are ties within ranks we have stacked the variables on the basis of the number and "quality" of data tendencies uncovered in the course of the calculations. For example, while both the centralization of power and organizational slack variables produced five associations each, the former tended to generate more instances where a reasonably clear-cut data pattern allowed us to speculate as to whether there was a tendency to reject or accept alternative proportions, even though we could not in every instance, reject the null hypothesis. Admittedly, this is a relatively subjective judgement.

When we sort the dependent variable sets to summarize how they are linked to the independent sets, we have the distribution displayed in Table 47. As shown, each of the four original sets is represented in the Table. When we break down the sets by the individual variables, we find two innovations--use of project coordinators to expedite complex construction projects and cross-training of inspectors to be the most likely ones to be related to the independent variables within the first ranks. Together these two account for almost 30 percent of all the associations found. They represent, respectively, the information access and personnel professionalism sets. It is noteworthy that proportionately few management set variables are revealed within the top ranked sets.

The use of a project coordinator is statistically linked to centralization of power, organizational slack level, boundary spanning, and professionalism indicators. The cross-training of inspectors is connected to the centralization of power concept, to two community variables--economic competition and community size--and to the professionalism indicator, attitude toward professional certification. The association levels for the other, lesser ranked, variables are shown in the Table.

TABLE 47
RANKING OF DEPENDENT VARIABLES

Variable (innovation)	Set	Number of Associations	Rank
Use of project coordinator	Information access	4	1
Cross-trained building inspectors	Personnel	4	1
Unified application forms	Administrative review	3	2
Work stations clearly marked and identified	Information access	3	2
Use of development review committee	Administrative review	2	3
Use of employee procedure manuals	Management	2	3
Recent change in permitting procedures	Management	2	3
Require inservice training	Personnel	2	3
Contract out plan review	Administrative review	2	3
Provide preliminary plan review sessions	Administrative review	1	4
Use customer service coordinator	Information access	1	4
Use computers for data record keeping	Management	1	4
Use brochures and pamphlets to explain permitting	Information access	0	5
Cross-train permit clerks	Administrative review	0	5
Total		27	

In summary, if one were to choose, from the range of independent variables presented, those most likely to be linked to Florida building agency innovations, one should focus upon the top six concepts presented--centralization of power, organization slack, boundary spanning activities, professionalism of inspectors (as measured by perceived discretion levels), economic competition between local builders and developers, and community size. For our findings, the best innovation indicators tend to be local government structural type (centralization of power) and percent revenues covering budgets (organizational slack). The innovations most likely revealed by these links relate to agency information access functions, personnel professionalism, and administrative review operations.

Discussion

We began this paper with the expectation that we could construct a clear typology in which to slot local Florida building regulatory agencies (and the communities in which they are located) according to their propensity to use or reject some of the citizen access promoting innovations we uncovered in the course of a local, then cross-national, study of this vital local government function. While we can, as noted in the previous section, now make limited statements about the links between certain political, community, and organizational factors and specific agency innovations, what is plain is that, contrary to our optomistic expectations, no clear-cut typology among agencies emerges. Certainly, we can indeed see a tendency for the types of local government structure, agency revenues, boundary spanning activities, and professional norms to be important in orienting Florida building regulatory agencies to making certain types of changes. And, it is extremely interesting that our top ranked independent variables coincide with those identified by a very recent American Planning Association study of the factors which influence planning agency effectiveness, a related development regulatory organization.[1]

However, we cannot, in the absence of further research, be much more specific at this point. Indeed, more questions than answers remain. Perhaps this research, as the first effort to catalog and explore this area in Florida, will generate other investigations into these questions.

For example, our data suggests that, with the exception of local government structure, most political variables rank relatively low in importance in explaining innovation adopting stances in building regulatory agencies. This flies in the face of previous reports concerning these agencies and we are curious as to the other dimensions on which this aspect could, or should, be measured.

We find too that, as dependent variables, management innovations (use of employee procedure manuals, computers, and changing agency procedures within the last year's time) tend to be less likely linked with any of our political, community, or organizational variables than the other dependent sets, and, moreover, these innovations, on the whole are less likely found within Florida agencies than we would expect. This is particularly true relative to the use of computers to record and recall permit data. Since this feature is increasing rapidly in acceptance in other growth states, we think further study ought to be directed to the changing use of computer-assisted record keeping for local building and development concerns in Florida. Because the computerization of land development and use information is, ultimately, an act of power on the part of municipal and county managers or mayors,[2] such studies ought to give us some time-based indications as to how well these officials are centralizing control over these vital local functions.

Indeed, because the entire field is so new to systematic inquiry, time-series analyses and data are lacking relative to most of the state's local land, building and development regulatory agencies. It is ironic that, in an era of growing outrage against all government "intrusions," so little study has been devoted to the methods of incorporating procedural innovations to streamline agency functions and make them more responsive to citizen demands. Such studies should begin in Florida (and elsewhere).

In particular, we think that researchers need to evaluate regulatory changes over time by talking to agency employees, both leaders and rank and file, and by interviewing the citizens whose interests are directly affected by such changes. How else are we to make our local agencies more responsive to citizen needs?

One area that seems particularly promising for regulatory research purposes pertains to informal or alternative negotiating processes as partial substitutes for adversarial regulatory confrontation. This is particularly true, we believe, for building and land-use agencies that oversee "weak-market" (e.g. central city or rural) jurisdictions. Indeed, our data points out that, on the whole but especially in larger urban communities, agency staff tend to prefer informal plan and development review sessions to the highly structured (and visible) formal meetings that other communities have instituted. While the latter features are innovations, they may tend to lock public and private participants into adversary positions which, in the final analysis, benefit neither the public interest nor private enterprise. Among federal bureaucracies, the Environmental Protection Agency has taken the lead in seeking out alternatives, and less rigid regulatory methods.[3]

Conclusion and Summary

At the outset of this study, we stated that we sought to explore whether or not local building inspection departments in Florida significantly and systematically differed from one another in their treatment of clients, as indicated by agency use of specific innovative administrative, personnel, information, and management procedures and features. Based upon our sets of political, community, and organizational independent variables, we have indeed found evidence that agencies do vary when it comes to adopting certain important procedural innovations. While we regret that the data is not sufficiently clear-cut for us to pinpoint indelible behavioral patterns we believe that, as an initial effort in this area of critical building regulatory research, we have provided basic administrative and organizational process models and information which ought to be invaluable to future research

Notes

1 See, Robert C. Einsweiler. December, 1980. "What the Top People are Saying About Central City Planning," *Planning*. Vol. 46, No. 12: 15-19.

> The study lists 14 factors that, according to six of the nation's leading planners, are seen to influence planning agency effectiveness, particularly for core urban areas.
>
>> The six planners who devised this list of priorities obviously believe that the *budget*, the *government structure*, and the *director's relation to the mayor or city manager* assume top importance. Also vital, they say, is the state of the local economy (p. 18).

2. Downs (1967) has contributed one of the earliest and most provocative articles on the power shifts which urban data systems bring to local decision making. In it he notes that:

1. Lower and intermediate-level officials tend to lose power to higher level officials and politicians.
2. High-level staff officials gain power.
3. City and state legislators tend to lose power to administrators and operating officials.
4. The government bureaucracy as a whole gains power at the expense of the general electorate and nongovernmental groups.
5. Well-organized and sophisticated groups of all kinds, including some government bureaus, gain power at the expense of less well organized and sophisticated groups.
6. Within city governments, those who actually control automated data systems gain power at the expense of those who do not.
7. Technically educated officials with city governments gain power at the expense of old-style political advisors. (p. 208)

See Anthony Downs. September, 1967. "A Realistic Look at the Final Payoffs from Urban Data Systems," *Public Administration Review*: 208-210.

3 William Drayton, Assistant Administrator for Planning and Management with the United States Environmental Protection Agency, notes some of the problems of traditional regulatory law enforcement in an excellent recent article:

> Regulatory law enforcement, from the time a violation is detected onward, is a mess. If an agency is lucky enough to detect a violation, it is often able to do little more. If jawboning fails to induce compliance, regulators must either give up or litigate, and litigation is uncertain, slow, and costly. Even if the agency does prevail in court, it cannot be sure that the judge, who may be reluctant to impose over-criminalized and standardless penalties, will provide an adequate remedy. As a result, massive delay occurs, public and private resources are wasted, scofflaws are rewarded, and voluntary compliance is undermined (p. 1).

Drayton goes on to argue for "economic law enforcement," a system he helped implement in Connecticut. It seeks to substitute economic inducements for compliance with environmental regulations for traditional enforcement mechanisms. See William Drayton. November, 1980. "Economic Law Enforcement." The Harvard Environmental Law Review, Vol. 4, No. 1: 1-39.

APPENDIX A

CRITIQUE SHEET

"CRITIQUE" GUIDE SHEET FOR INTERVIEWERS

July 28-29, 1977

NOTES TO INTERVIEWERS (1) These questions are to be asked after the agency or dept representative has checked over the diagram and narrative for the final time. For easy reference you should have the diagram laid out in front of you both
(2) following the questions (below) please ask the representative to sign the typed "certification sheet". This is for our records in order to check that the teams have completed their assignments. (3) Please remember that you probably have another appointment to make elsewhere (i.e. at 11AM) therefore, if it looks like you can't finish the below questions, make a reappointment for early Friday afternoon

(If necessary, use a separate sheet to record answers & attach)

1. From the user's standpoint (e.g., homeowner, developer, contractor, or other city agency/dept/bureau) where do you think the greatest time delays are in this agency's processes?

   A. From the administrator's standpoint, where are the greatest time delays or bottlenecks?

2 Other than time delays, what (or where) do you think the major problems are in this process for the user?

3 If you had power to completely change this process (or reorganize this agency) what would you do to make it more efficient and effective for both administrators and users?

4 Do you think that the flow of information between your agency and external departments & agencies could be "speeded up"? If "yes," how?

a Could you use information from other city, county, state or federal agencies that you are not now getting in order to improve this agency's effectiveness and efficiency?

If "yes", what type of information and from which agencies?

APPENDIX B

TABULATED BUILDING REGULATORY QUESTIONNAIRE

I. ADMINISTRATIVE REVIEW

1. Please indicate (with check marks) all permitting, plan review, regulatory approval and/or inspectional functions for which your agency is responsible or which it performs

A. building permit applications____ building inspections____
B. mechanical systems applications____ mechanical inspections____
C. electrical systems permit applications____ electrical inspections____
D. plumbing/gas system permit applications____ plumbing/gas inspections____
E. landscape reviews/approvals____
F. site plan reviews/approvals____
G. zoning applications____
H. zoning enforcement inspections____
I. tree removal applications/approvals____
J. traffic engineering reviews____
K. drainage engineering reviews____
L. issuance of temporary permits (e.g. for circuses, revivals, etc.)____
M. enforcement of minimum housing standards (inspection of existing construction)____
N. sanitation inspections____
O. fire safety inspections____
P. sewer hookup approvals____
Q. well drilling permits/approvals____
R. sanitary sewer hookup approvals____
S. septic tank permits/approvals____
T. right-of-way determinations____
U. occupational licensing____
V. land-use planning____
W. contractor and subcontractor licensing____
X. other (please specify)____________________________________

Highest number of agency functions 25
Lowest number of agency functions 5
Mean number of agency functions 17.9

2. For one or two family residential construction can all permits and other necessary approvals (e.g. see question 1 above) be obtained

at one place (e.g. at one geographical location)
111 (81.5%) ____Yes
15 (14.0%) ____No
6 (4.4%) N/A*

at one time (e.g. all in one working day)
____Yes 68 (50.0%)
____No 61 (44.9%)
N/A 7 (5.1%)

3. How would you classify your agency's permit application forms? (Check one)

91 (66.5%) ____ Separate application forms for electrical, plumbing, gas, building, mechanical, and other major permits

11 (8.1%) ____ Partially combined application forms (for example, plumbing and mechanical applications might be on the same sheet)

34 (25.0%) ____ Unified or totally combined application form for all major permits

4. Does your agency have the power to revoke contractor or subcontractor licenses?

58 (42.6%) ____Yes ____No 78 (57.4%)

5. Does your county provide developers or builders with a preliminary plan review meeting to go over potential problems that might be encountered in complex projects prior to the start of construction?

50 (36.8%) ____ Have a formal preliminary plan review process
____ Have an informal preliminary plan review process 6 (4.4%)
79 (58.1%) ____ Have no preliminary plan review process
N/A 1 (.7%)

---

* N/A = No Answer

6. For complex construction projects (e.g., multi-family residential, large commercial, industrial) does your agency participate in an established "Development Review Committee" procedure which allows other land-use, development or building regulatory agencies (e.g., the Planning Department, Fire Department, etc.) to comment upon permit applications?

98 (72.1%) ____ Have Development Review Committee or similar procedure

30 (22.1%) ____ Do not have Development Review Committee or similar procedure

8 (5.9%) N/A

7. In your agency are plan reviews/examinations primarily performed by

24 (17.6%) (A) ____ Registered architects/engineers

25 (18.4%) (B) ____ Class A general contractors

86 (63.2%) (C) ____ Employees other than A and B above

1 (0.7%) N/A

8. Does your agency ever contract with private architectural, engineering or contracting firms to perform plan reviews or examinations?

36 (26.5%) ____ Yes

98 (72.1%) ____ No

2 (1.5%) N/A

9. Can anything be done, in your opinion, to speed up permit application or plan review processes without sacrificing public safety goals or the quality of the review process?

36 (26.5%) ____ Yes

94 (69.1%) ____ No

6 (4.4%) N/A

If yes, what do you suggest?

Permit Applications See page 11 for responses.

Plan Review See page 11 for responses.

II PERSONNEL

10. How many building inspectors does your agency have? ____

High 50
Low 1
Mean 4.9

11. How many permit clerks does your agency have? ____

High 9
Low 1
Mean 2.1

12. Are building inspectors "cross-trained" so that each can perform the other's functions (that is, so that all inspectors can perform all types of construction inspection)?

53 (39.0%) ____ Totally cross-trained

52 (38.2%) ____ Partially cross-trained

23 (16.9%) ____ Not at all cross trained

8 (5.9%) N/A

13 Are permitting clerks "cross-trained" so that each can review applications and issue different types of permits?

56 (41.2%) ____ Totally cross trained

48 (35.3%) ____ Partially cross-trained

18 (13.2%) ____ Not at all cross trained

14 (10.3%) N/A

14 What are your agency's minimal entrance requirements for inspectors?

See page 11 for responses.

15 Do you favor increasing these requirements?

42 (31.6%) ____ Yes

85 (62.5%) ____ No

8 (5.9%) N/A

16 Do you favor a statewide professional certification (or registration) program for building inspectors in Florida?

107 (78.7%) ____ Yes

20 (14.7%) ____ No

9 (6.6%) N/A

17 Does your agency have in-service training requirements for inspectors (e.g. programs through a local community college, short courses etc.)?

55 (40.4%) ____ Yes

79 (58.1%) ____ No

2 (1.5%) N/A

18 Which, if any, of the following individuals in your agency have civil service or union job protection? (Check)

(A) Chief building official
civil service ____
union ____
neither ____

(B) Building inspectors
civil service ____
union ____
neither ____

(C) Permit clerks
civil service ____
union ____
neither ____

(D) Other (specify)
civil service ____
union ____
neither ____

See page 12 for responses

19. Please estimate the average annual salary of building inspectors in your agency
High $23,378
Low $1,200 ________ Average annual salary
Mean $12,333

III CODES AND CODE ENFORCEMENT

20. What building code does your community use?

111 (81.6%) ____ SBC

3 (2.2%) ____ Local code based on national code

____ Unique Local Code (e.g. SFBC) 20 (14.7%)

____ Other (specify) 1 (0.7%)

N/A 1 (0.7%)

21 If your community uses the model code (Standard Building Code), how extensively would you estimate that it has been amended to fit local interests/concerns/purposes?

2 (1.5%) ____ Very extensive amendments

22 (16.2%) ____ Moderately extensive amendments

68 (50.0%) ____ Little/few amendments

25 (18.4%) ____ No amendments

7 (5.1%) ____ Cannot judge

12 (8.8%) N/A

22 How would you generally rate your local elected officials (e.g. mayor/council/commission) as to their knowledge of local building code requirements and/or the "ins and outs" of construction work?

23 (16.9%) ____ As a group they are usually highly knowledgeable about building codes and construction

88 (64.7%) ____ As a group they usually have little or no knowledge about codes or construction

13 (9.6%) ____ No one usually knows anything about codes and construction

11 (8.1%) ____ Cannot judge

1 (0.7%) N/A

23 In your estimation, how much discretion does the building inspector actually have in enforcing the building code in your community?

27 (19.9%) ____ No discretion at all; the inspector enforces the code exactly as it is written.

59 (43.4%) ____ Little discretion; the inspector has only a small amount of leeway in accepting or denying work that varies from the code

31 (22.8%) ____ Moderate discretion; the inspector has a fair amount of leeway in accepting or denying work that varies from the code

18 (13.2%) ____ Significant discretion; the inspector has a great deal of freedom in exercising his own judgment as to accepting or denying work that varies from the code

1 (0.7%) ____ Cannot judge

24 Do you think that it is okay for the level of code enforcement to vary depending upon who the client is? (That is, would you expect an inspector to be "tougher" with a large scale, experienced contractor than with a "do-it-yourself" homeowner?)

23 (16.9%) ____ Yes

112 (82.4%) ____ No

1 (0.7%) N/A

25 Does your agency, as a matter of policy, go "out of its way" to provide extra advice and assistance to:

(A) Homeowners ("do-it-yourself")

127 (93.4%)____ Yes

9 (6.6%) ____ No

(B) Small scale or inexperienced developers

114 (83.8%)____ Yes

20 (14.7%)____ No

2 (1.5%) N/A

(C) Small-scale or inexperienced contractors

114 (83.8%)____ Yes

20 (14.7%)____ No

2 (1.5%) N/A

26 Do you think that your agency treats "outsiders"--that is contractors, developers, or builders from out-of town differently than local individuals?

5 (3.7%) ____ Yes

131 (96.3%)____ No

27. Do you think individual inspectors treat "outsiders" differently than local permit applicants?

8 (5.9%) ____ Yes

128 (94.1%)____ No

28 Relative to code enforcement, do you think your agency treats large-scale developers, builders, contractors differently than small-scale individuals?

7 (5.1%) ____ Yes

129 (94.9%)____ No

29 If yes above, does this mean that large-scale developers

6 (4.4%) ____ Are subject to a higher review standard in application, plan review or construction inspection than small scale developers?

2 (1.5%) ____ Are subject to less rigorous review standards in application, plan review, or construction inspection than small-scale developers?

128 (94.1%) N/A

30 Do you feel that the construction permitting process in your jurisdiction is subject to unusually strong political pressures or interferences?

12 (8.8%) ____ Yes 123 (90.4%)____ No

1 (0.7%) N/A

31 If you answered yes above, at what phase of the permitting process does this pressure or interference tend to occur?

4 (2.9%) ____ Application Phase

5 (3.7%) ____ Plan Review Phase

2 (1.6%) ____ Construction Inspection Phase

2 (1.5%) ____ "CO"—Final Inspection Phase

6 (4.4%) ____ All of the above

2 (1.4%) ____ Other (specify please)

115 (84.6) N/A

32 What groups or individuals tend to be most likely --in your experience-- to exert direct or indirect political pressure on you or agency employees (e.g., to "shortcut" procedures, "look over" zoning problems, speed-up permit issuance, amend the code, etc.)

If more than one group is involved, please try to rank them 1, 2, 3, etc. relative to most to least pressure in your experience.

See table on
page 13 for
responses

_____ Local building materials manufacturers/suppliers

_____ Out-of-town building materials manufacturers/suppliers

_____ Local trade associations

_____ National trade associations

_____ General contractors

_____ Subcontractors

_____ Architects

_____ Engineers

_____ Homeowners/"do-it-yourselfers"

_____ Developers/builders

_____ Elected officials

_____ Appointed officials

See page 12 for responses. Other public employees (please specify)

33 How seriously does this pressure interfere --if at all-- with your agency's ability to effectively carry out its goals?

4 (2.9%) _____ Very seriously

14 (10.3%) _____ Moderately seriously

48 (35.3%) _____ Not very seriously

56 (41.2%) _____ Not at all

2 (1.5%) _____ Helps agency achieve its goals

1 (0.7%) _____ Other

11 (8.1%) N/A

IV MANAGEMENT

34 Does your agency maintain employee procedures manuals which guide permit clerks and/or inspectors in making day-to-day decisions about agency policy or goals?

65 (47.8%) _____ Yes

70 (51.5%) _____ No

1 (0.7%) N/A

35 [illegible] percentage of your agency [illegible] covered by [illegible] permits issued

69 (50 7%) ____ 100% (total [illegible] through permit fees)

23 (16 9%) ____ 75 99% (great majority of budget covered by permit fees)

25 (18 4%) ____ 51-74% (most of budget covered by permit fees)

8 (5 9%) ____ 25-50% (some of budget covered by permit fees)

7 (5 1%) ____ 0-24% (small portion covered by permit fees)

4 (2 9%) N/A

36 Does your agency use computers (either in house or through an external agency) for any or all of the following? (Check)

3 (2 2%) ____ Recording permit data

2 (1 5%) ____ Recalling permit data

____ Inspection routing

17 (12 5%) ____ Other computer assisted operations (please specify)

114 (83 8%) ____ Don t use computers at all

37 How closely does your agency work with the land-use planning agency in your jurisdiction?

57 (41 9%) ____ Very closely (everyday contact)

35 (25 7%) ____ Moderately close (once or twice weekly)

29 (21 3%) ____ Not very closely (once or twice monthly)

12 (8 8%) ____ Not at all (never interact)

3 (2 2%) N/A

38 If you could change anything you wanted in your agency in order to make it more effective or efficient in carrying out its goals, what would you do? (Use back of page if necessary)

See page 14 for responses.

39 Relative to your agency s contact with its customers (e g architects, contractors, engineers, subcontractors, do-it yourselfers, anyone who takes out permits) what are the things that bother you most? (Rank 1, 2 3 if possible)

See table on Page 15 for responses.

____ They don t know code requirements

____ They argue with inspectors

____ They don t treat building employees with respect

____ They try to use political pressure to get what they want

____ They don t read permit instructions

____ They try to get away with things (fool inspectors)

____ Other (specify)

See page 14 for responses

V CUSTOMER/CITIZEN INFORMATION AND ACCESS

40 Does your agency routinely provide customers with brochures, pamphlets or other written materials that explain or describe permit requirements or the processing procedures?

99 (72.8%)____ Yes

37 (27.2%)____ No

41 If you answered yes to the question above, approximately when were these materials last updated?

48 (35.3%)____ Within the past 6 months

31 (22.8%)____ 6 months – 1 year ago

14 (10.3%)____ 1 – 2 years ago

5 (3.7%) ____ Longer than 2 years ago

38 (27.9%) N/A

42 Are your agency's permit application and plan review work stations clearly marked and easily identifiable by customers/citizens?

112 (82.4%)____ Yes

16 (11.8%)____ No

8 (5.9%) N/A

43 Does your agency have a designated customer service coordinator or representative to help explain permit requirements or procedures?

48 (35.3%)____ Yes

88 (64.7%)____ No

44 Does your agency have a designated project coordinator or plans expediter to help citizens involved in large-scale or complex construction move quickly and expeditiously through review phases?

53 (39.0%)____ Yes

80 (58.8%)____ No

3 (2.2%) N/A

45 When was the last time permitting procedures in your agency were significantly changed or revised?

33 (24.3%)____ Within last 6 months

30 (22.1%)____ 6 months – 1 year ago

22 (16.2%)____ 1 – 2 years ago

49 (36.0%)____ More than 2 years ago

2 (1.5%) N/A

VI COMMUNITY

46 How would you rate economic competition among builders and developers within your agency's jurisdiction?

41 (30.1%)____ Highly competitive market

67 (49.3%)____ Moderately competitive market

14 (10.3%)____ Low competition in market

13 (9.6)____ Can't judge

1 (0.7%) N/A

47 How would you classify your community?

8 (5.9%) ____ Pro growth (for increased land development at all costs)

1 (0.7%) ____ No growth (against increased land development at all costs)

84 (61.8%) ____ Planned growth (for carefully considered growth)

39 (28.7%) ____ Mixed growth pressures

2 (1.5%) ____ Can't judge at all

2 (1.5%) N/A

48 How would you rate City-County land development competition in your area

9 (6.6%) ____ Very competitive between City and County

32 (23.5%) ____ Moderately competitive between City and County

53 (39.0%) ____ Little competition between City and County

39 (28.7%) ____ No competition

3 (2.2%) N/A

49 What is the type of government structure in your community?

75 (58.1%) ____ Manager/council (or commission)

23 (16.9%) ____ Mayor/council (or commission)

33 (24.3%) ____ Commission

Strong 10 (7.4%)
Weak 7 (5.1%)
N/A 119 (87.5%)

(Note: If mayor/council, please indicate if it is "strong" or "weak" mayor form.)

50 How effectively do you feel your agency is enforcing the state's new energy efficiency code?

67 (49.3%) ____ Very effectively

55 (40.4%) ____ Moderately effectively

5 (3.7%) ____ Not at all effectively

____ Other (Specify)

9 (6.6%) N/A

OTHER TABULATED RESPONSES

9 PERMIT APPLICATIONS (Open-ended Question)

There were a variety of open-ended responses to this question. A total of 22 answers were obtained. Of these, almost half (10) of the respondents tended to stress "centralizing application procedures and educating the public and communicating with them better" relative to code and agency requirements. Other scattered responses were: "employ more personnel," "employ more qualified personnel," "certify or stamp plans," "combine and/or standardize permit applications," "eliminate unnecessary reviews and approvals," and "eliminate state reviews."

PLAN REVIEW (Open-ended Question)

A total of 30 individuals provided answers to this question. Respondents identified three major improvements which they thought could speed-up plan review without sacrificing public safety requirements or the quality of review. These improvements were: "coordinate and/or centralize plan review processes," "citizen and/or clients should provide better information," and "have more qualified (agency) personnel." Together, these suggestions accounted for 19 responses. Other suggested improvements were: "employ more personnel," "walk thru plan review," "agencies should give better information," "omit unnecessary state and/or federal reviews," and "omit city council reviews."

14 MINIMUM ENTRANCE REQUIREMENTS (Open-ended Question)

The great majority of building officials responding to this question (116 or 85 percent) report that their agencies have formal training, educational or experience related minimum entrance requirements. Only four respondents (2.9 percent) indicated that their organization had no minimum entrance standards. More than a third of those answering (49 or 34.5 percent) noted two or more acceptable alternative job entrance prerequisites. These consisted of such possibilities as: prior building inspection experience, a number of years of on-the-job construction experience, construction experience and college education, or possession of a journeyman or contractor's license. Of agency personnel responding, 34 (or 25 percent) stated that their organization required applicants to meet Standard Building Code criteria, while seven respondents (5.1 percent) indicated that meeting South Florida Building Code standards was necessary. Five individuals (3.7 percent) noted that their agency follows BOAF entrance guidelines. Respondents from Broward County indicated that they were required to follow county entrance criteria.

CIVIL SERVICE OR UNION JOB PROTECTION

A CHIEF BUILDING OFFICIAL

Civil Service	23 (16.9%)
Union	0 (0.0%)
Neither	101 (74.3%)
N/A	12 (8.8%)

B BUILDING INSPECTOR

Civil Service	31 (22.8%)
Union	8 (5.9%)
Neither	75 (55.1%)
Both	8 (5.9%)
N/A	14 (10.3%)

C PERMIT CLERKS

Civil Service	37 (27.2%)
Union	7 (5.1%)
Neither	71 (52.5%)
Both	7 (5.1%)
N/A	14 (10.3%)

D OTHER

Zoning Officials

Civil Service	6 (4.4%)
Union	2 (1.5%)
Neither	16 (11.8%)
Both	2 (1.5%)
N/A	110 (80.9%)

Secretary

Civil Service	4 (2.9%)
Neither	12 (8.8%)
N/A	120 (88.2%)

32 OTHER (Open-ended)

Eight individuals provided answers to this part of Question 32 'Ex-officials, department heads," 'real-estate brokers" and the general public' were identified by these respondents as these people likely to exert political pressures on the permitting process

32 What classes of individuals tend to be most likely—in your experience—to exert direct or indirect political pressure on you or agency employees (e g to "shortcut" procedures "glass over" zoning problems speed up permit issuance, amend the code etc)?

	Most Pressure 1	Ranking 2	3	4	5	6	Least Pressure 7	Identified but not ranked	No answer	Total
Local building materials manufacturers/suppliers		3* (2 2%)	1 (0 2%)					2 ([illegible])	130 ([illegible] 6%)	1 6 ([illegible])
Out-of town building materials manufacturers/suppliers	3 (2 2%)	1 (0 7%)	1 (0 7%)						[illegible]	[illegible]
Local trade associations		3 (2 2)	2 (1 [illegible])		1 (0 2%)			[illegible]	[illegible]	[illegible]
National trade association	1 (0 7%)		2 (1 5%)						[illegible]	6 ([illegible])
General contractors	3 (2 2%)	6 (4 4%)	6 ([illegible])	1 ([illegible] 7%)	1 (0 2%)			6 (4 4%)	113 (63 1%)	136 (100 0%)
Subcontractors	1 (0 7%)	2 (1 5%)	2 (1 5)	1 (0 7%)	1 (0 2%)	1 (0 2%)		2 (1 5%)	126 (92 6%)	136 (100 0%)
Architects	5 (3 7%)	4 (2 9%)		2 (1 5%)	1 (0 7%)			2 (5 1%)	117 (86 0%)	136 (100 0%)
Engineers	1 (0 7%)	3 (2 2%)		2 (1 5%)		1 (0 2%)		3 (2 2%)	126 (92 6%)	136 (100 0%)
Homeowners/ "do it yourselfers"	19 (14 0%)	5 (3 7%)	4 (2 9%)	1 (0 7%)	1 (0 7%)			22 (19 9%)	79 (58 1%)	136 (100 0%)
Developers/builders	8 (5 9%)	6 (4 4%)	2 (1 5%)		1 (0 2%)			11 (8 1%)	108 (79 4%)	136 (100 0%)
Elected officials	11 (8 1%)	5 (3 7%)	3 (2 2%)	3 (2 2%)		1 (0 7%)		13 (9 6%)	108 (23 5%)	136 (100 0%)
Appointed officials	1 (0 7%)	3 (2 2%)	4 (2 9%)				1 (0 2%)	1 (0 7%)	126 (92 6%)	136 (100 0%)

* The number represents the absolute frequency of answers to the question [illegible] the relative frequency (percent) of those answering the question

38 CHANGE AGENCY TO MAKE MORE EFFECTIVE/EFFICIENT

Fifty-one responses were generated in reply to the question 'If you could change anything you wanted in your agency in order to make it more effective or efficient in carrying out its goals, what would you do? These responses were grouped into nine relatively distinct categories The categories and the number of responses for each were

		# of responses
1	Improve/change record keeping/systems/procedures/codes	13
2	Educate/train better (public/employees/boards) relative to agency functions	11
3	Improve salaries/equipment	7
4	Separate agency from other agencies/functions	4
5	Combine the agency with other agencies/functions	3
6	Coordinate/improve relations with other agencies	3
7	Eliminate/reduce political pressures or interference	3
8	Increase agency police and other powers	3
9	Reduce agency police and other powers	1

39 OTHER (Open-ended)

A total of ten individuals provided answers to this question The two items respondents tended to stress were "bad or incomplete plans' and "no communications Other responses included "unapproved plan changes," "no permits,' "homeowners cause problems " and 'want inspectors to do work for them.'

39 Relative to your agency's contact with its customers (e.g. architects, contractors, engineers, subcontractors, do-it-yourselfers,--anyone who takes out permits) what are the things that bother you most? (Rank 1, 2, 3, if possible.)

	Bother Most 1	2	3	4	5	6	Bother Least 7	Identified but not ranked	No answer	Total
They don't know code requirements	54* (39.7%)	17 (12.5%)	4 (2.9%)	1 (0.7%)				29 (21.3%)	31 (22.8%)	136 (100.0%)
They argue with inspectors	1 (0.7%)	8 (5.9%)	8 (5.9%)	6 (4.4%)	3 (2.2%)	2 (1.5%)		1 (0.7%)	107 (78.7%)	136 (100.0%)
They don't treat building employees with respect	2 (1.5%)	2 (1.5%)	6 (4.4%)	4 (2.9%)	4 (2.9%)	5 (3.7%)			113 (83.1%)	136 (100.0%)
They try to use political pressure to get what they want	9 (6.6%)	8 (5.9%)	7 (5.1%)	5 (3.7%)	3 (2.2%)	5 (3.7%)	1 (0.7%)	4 (2.9%)	94 (69.1%)	136 (100.0%)
They don't read permit instructions	12 (8.8%)	25 (18.4%)	9 (6.6%)	3 (2.2%)		2 (1.5%)		26 (19.1%)	59 (43.4%)	136 (100.0%)
They try to get away with things, fool inspectors	5 (3.7%)	14 (10.3%)	19 (14.0%)	2 (1.5%)	5 (3.7%)	1 (0.7%)		9 (6.6%)	81 (59.6%)	136 (100.0%)

*This number represents the absolute frequency of answers to the question, while the number in parenthesis represents the relative frequency (percent) of those answering the question

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BIOGRAPHICAL SKETCH

Richard Harold Schneider was born February 14, 1947, at Brooklyn, New York. His family moved to South Florida in 1953. He was graduated from North Miami Senior High School in 1964. In June, 1969, he received the Bachelor of Arts degree, with a major in Political Science, from the University of Florida. He enrolled in the Ph.D. program in the Department of Political Science in 1971, and received the degree of Master of Arts in March, 1973. In June, 1975, he was awarded the Certificate in Urban Studies from the University of Florida's Urban and Regional Development Center.

Richard Harold Schneider is currently Associate Director, Florida Architecture and Building Research Center, and on the faculty of the University of Florida's Department of Urban and Regional Planning in the College of Architecture. He is a member of the American Institute of Certified Planners. He is married to the former Pamela Ann Kossove. They have a new daughter, Samantha Raye.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy

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